A TRANSFORMATIONAL APPROACH TO THE NOUN - PHRASE IN PERSIAN

by

Shadab Vajdi, B.A. (Persian Literature, Tehran) ,
M.A. (Social Science , Tehran)

A thesis submitted for the Degree of Doctor of Philosophy in the Department of Phonetics and Linguistics , School of Oriental and African Studies , University of London .

October , 1976 .

Abstract

The subject of this thesis is the description of the noun-phrase in Persian on the basis of the transformational theory as described by Chomsky in Aspects of the Theory of Syntax . The first chapter of the thesis is devoted to a description of the syntactic behaviour of the noun-phrase within simplex sentences - both those formed by the verbs budan or &odan and those formed by other verbs. This involves description of the noun-phrase within simple interrogative sentences and, also, within sentences formed with passive verbs.

The subject of the second chapter is a description of the syntactic behaviour of the noun-phrase within complex sentences. The differences between restrictive and non-restrictive clauses have been discussed. The syntactic behaviour of the noun-phrase within sentences formed by the verbs budan or &odan[i] has been described separately in this chapter. The last part of the second chapter is devoted to a description of complements.

Pronouns and the process of pronominalization in Persian constitute the subject of Chapter Three. The syntactic behaviour of the reflexive and the emphatic pronouns, as well as that of the personal pronouns, is

(i) budan="to be", &odan="to become".

illustrated and discussed in this chapter.

Chapter Four has been devoted to adjectives. Different kinds of adjectival/nominal constructions are illustrated in this chapter.

Chapter Five deals with the grammatical status of determiners in Persian. It also gives a definition and goes into a description and classification of different kinds of determiners in Persian.

Finally, the three senses of the noun, the composition of the noun-phrase in the surface structure and the grammatical status of the infinitive in Persian are illustrated in Chapter Six.

Contents

Acknowledgement

First and foremost, I must express my deep gratitude to my supervisor, Dr. Buse, whose guidance and advice have been the prime factors in the completion of this thesis .

I am also deeply indebted to Dr.N.V.Smith of the University College , London who was my tutor when he was with the School of Oriental and African Studies . It was Dr. Smith who , in the course of his lectures, introduced me to the Theory of Transformational Grammar .

I further wish to thank all members of the Department of Linguistics of the School of Oriental and African Studies. In particular, I wish to extend my gratitude to Professor Robins, the Head of the Department, to Mrs. Waterson and to Dr. R.M. Kempson .

Throughout the compilation of this thesis, my husband has been an invaluable informant through his deep knowledge of Persian and his experience of teaching Persian language and literature both to Persian speaking students and to non-Persian speaking ones .

Miss J. Thornton has shown great patience in producing an impeccable typewritten version of my thesis and I hope she will accept my sincere thanks .

The Notation for Abbreviated Forms and Symbols (i)

A,B = The choice of any item is free and they are not mutually exclusive. In other words, A and B or A or B.

A - B = Items dominated by different nodes in sucession, and, in the case of lexical rules, different lexical items which can occur in the same place.

$\left\{\begin{matrix} A \\ B \end{matrix}\right\}$ = The choice of any item is free and they are mutually exclusive: In other words, either A or B.

A + B = A should be attached to the node which dominates B, or B should be attached to the node which dominates A.

A $\Longrightarrow$ (B) C (D) = A might consist of C or B-C-D or C-D or B-C but not B and D alone.

$\begin{matrix} A \\ \left[\begin{matrix} a \\ b \\ c \end{matrix}\right] \end{matrix}$ = a, b and c are different features associated with A.

(i) In this list of abbreviations, the conventions of transformational literature (such as NP = noun-phrase ... etc.) have not been included. These conventions have been used throughout the thesis.

$[_{A}\ a\ -\ b\ ]_{A}$ = a and b are nodes which are derived from node A.

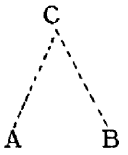
$A < B$ = B is dominated by A

$A > B$ = A is dominated by B

P.M. = phrase marker

* = ungrammatical sentence

(*) = ungrammatical but acceptable sentence according to the context and style.



= In phrase markers, the lines which are shown by dots indicate the inapplicability of the tree.

$A^1 \ldots B^1$ = B and A are identical and coreferential.

$A^1 \ldots B^2$ = B and A are not identical and coreferential.

Σ = The combination of two conjoint sentences.

$\not\equiv$ = The boundary of Σ

Phonemic Transcription used in the Thesis

/@/ = [ɑ]	:	open, back, unrounded vowel
/a/ = [a]	:	open, front, unrounded vowel
/e/ = [e]	:	half close, front, unrounded vowel
/o/ = [o]	:	half close, back, rounded vowel
/i/ = [i]	:	close, front, unrounded vowel
/u/ = [u]	:	close, back, rounded vowel
/y/ = [j]	:	unrounded, palatal, semi-vowel
/b/ = [b]	:	voiced, bilabial, plosive
/p/ = [p]	:	voiceless, bilabial, plosive
/d/ = [d]	:	voiced, aveolar, plosive
/t/ = [t]	:	voiceless, aveolar, plosive
/g/ = [g]	:	voiced, velar, plosive
/k/ = [k]	:	voiceless, velar, plosive
/?/ = [ʔ]	:	glottal plosive
/j/ = [ʤ]	:	voiced, palato - alveolar, affricate
/c/ = [ʧ]	:	voiceless, palato - alveolar, affricate
/m/ = [m]	:	voiced, bilabial, nasal
/n/ = [n]	:	voiced, alveolar, nasal
/l/ = [l]	:	voiced, alveolar, lateral
/v/ = [v]	:	voiced, labiodental, fricative
/f/ = [f]	:	voiceless, labiodental, fricative
/z/ = [z]	:	voiced, blade-alveolar, fricative
/s/ = [s]	:	voiceless, blade-alveolar, fricative
/&/ = [ʃ]	:	voiceless, palato-alveolar, fricative

/3/ = [ʒ] : voiced, palato-alveolar, fricative

/r/ = [r] : roll lingual

/h/ = [h] : voiceless, glottal, fricative

/x/ = [x] : voiceless, velar, fricative

/q/ = [q] : voiceless, uvular, plosive

The column on the extreme left contains symbols used in the thesis. The other column contains the corresponding symbols used in the International Phonetic Alphabet.

Introduction and General Remarks

In this thesis, I have tried to show the major syntactic structures of the noun-phrase in Persian. The data on which I have based my analyses are derived from what I refer to as "the standard formal dialect of Persian" or, less scientifically, "the official language of Iran". This is used all over Iran (but not other Persian speaking countries or regions) as a medium within the bounds of formal (as opposed to colloquial) language. It is the language of newspapers, books (including text books), broadcasting and formal speech. Furthermore, it is the medium used in writing most letters. In short, in communication of any formal nature, it is the practice to abandon local dialects and to use the standard formal dialect. It cannot be attributed to any particular region. Some have erroneously attributed it to Tehran whereas, among colloquial regional dialects, that of Tehran is not the nearest to it if we consider all aspects and not pronunciation alone. It should, however, be noted here that the "standard formal dialect" is not very different from colloquial regional dialects of Iran. The main differences lie in the phonological aspects of the language with which we are not concerned in this thesis. I am also aware of the fact that the language, in all of its manifestations, is not a static phenomenon which can be placed in a static framework. It is variable, and relative to the extent that some syntactic structures which are used

only in the colloquial language by some native speakers may be used in the formal language by some others. In other words, one cannot draw a very sharp line or an absolutely decisive boundary between "formal" and "colloquial". In this respect there are many cases of controversy. The problem of limiting the data to a given time and to given native speakers will be with us throughout the thesis. It would, therefore, be more precise to say that this research has been conducted on the basis of the "standard formal dialect of Persian", within the limitations described above.

I must add that, in reference to "Persian dialects", I do not have in mind scores of languages spoken in Iran, although some of them may be officially referred to as "dialects of Persian". Apart from obvious cases of Turkish, Arabic and Kurdish, the most noteworthy of these languages are Baluchi, Mazandarani, Gilak, Larestani and Semnani. No reference to "Persian dialects" should be taken as a reference to any of these languages or to many lesser ones spoken in Iran. I think this clarification suffices, and obviously discussions about modes and principles of differentiation between "language" and "dialect" within the boundaries of Iran are not within the scope of this thesis. From now onwards, I use the word "Persian" to refer to the "standard dialect of Persian" as already defined.

The main framework within which I try to describe the noun-phrase in Persian is based on the standard theory of transformational grammar as described by Chomsky in his

Aspects of the Theory of Syntax . In fact three years ago I started the work on the basis of immediate constituent analysis. As the work went on, I reached some cases through my investigation which I found difficult to describe and illustrate in a satisfactory manner on the basis of immediate constituent grammar. These originally few cases grew to many and I found out that most of them could be best illustrated on the basis of transformational grammar. Although many problems have remained unsolved, they are fewer than before. In other words, I found immediate constituent grammar less powerful than transformational grammar for describing the real relation between grammatical elements; and also for depicting their syntactic status.

I am not inclined to say that T.G. is a perfect theory without any deficiencies. On the contrary, the theory of transformational grammar may well have shortcomings and deficiencies which should be overcome. But this is impossible unless transformational grammar is tested and applied as much as possible through the grammatical structures of different languages. I believe that providing a detailed and correct formulation of syntactic features of sentences will lead us to a deeper study of meaning. This is the aim I have had in mind throughout this work. Needless to say, because the analysis which is put forward by Chomsky in Aspects of the Theory of Syntax is for English sentences, wherever necessary I have adopted different analyses which are more suitable for the description of the structure of Persian noun-phrases. For instance, for the formulation of

the process of pronominalization in Persian, as this process is very complicated (p.130), I was forced to leave the track from the transformational grammar's conventions and to give, in addition to a T rule for pronominalization, a table which is connected to it and at the same time makes it complete (p.141).

The deep structures are justified by semantic interpretations which have been given to the surface structures by the native users of formal language, as well as by formal criteria. That is to say, appeal to the intuition of native speakers has been made, not only for distinguishing acceptable sentences from unacceptable ones, but also for reaching the deep semantic relations between elements within one sentence and, moreover, for reaching the deep semantic relations between different sentences.

My enquiries have not been direct. I have reached conclusions through indirect questions. So I used the competence of the native speakers of the formal language as a guide to the deep relations between elements of the language. In short, in setting up the deep structure, the formal model is transformational grammar, but the material to which the formal model is applied resides in the minds of native speakers. As I have said before, the formal justification of deep structures has been given in many cases.

As, in this thesis, I am dealing with the noun_phrase

and connected problems, the phrase structure (base) rules which are connected with the verb_phrase are not exhaustive. Nor am I going to give any formal or semantic justification for illustrating the rules connected to the verb_phrase. In my examples, I have often used the simple present or the simple past tense to avoid complications which are irrelevant to the thesis.

For the sake of simplification, I have omitted the auxiliary altogether whenever its existence is irrelevant to the main discussion. I have also omitted features associated with elements when they are not relevant to the subject concerned. Once I have produced a rule and shown how it is to be applied, I only refer to it in later cases and do not repeat it or illustrate the mode of its application. The order of application of transformational rules is given at the end of each chapter, and if the application of one rule before another one is crucial, the matter is shown and discussed.

There are two translations for each sentence or phrase given as an example. One is literal and the other one shows the correct meaning of the sentence in English.(i) In the case of untranslatable sentences, however, only a literal translation is given.

As this analysis is not a comparative one, almost no comparison has been made between grammatical structures of Persian and English. Only in rare cases have I done so,

(i) The literal translations of the constituent parts of compound verbs are linked together by hyphens. The same method is occasionally used to show the pronoun inherent in a verb .

where I think comparison might throw a light, help understanding, or reveal a point.

Although the title of this thesis is "A transformational Approach to the Noun-Phrase in Persian", I was bound to discuss and illustrate many points which have nothing to do with deep structures. I had to do that because in all or most Persian grammars(i) these points have been ignored or misunderstood. For example, all Persian grammars have regarded ke as a relative pronoun. I have had to illustrate the fact that ke is a conjunction and not a relative pronoun (see p.69, Chapter 2). Another case is the illustration of the differences in the syntactic behaviour of bound and free forms of pronouns. In Persian grammars, these two kinds of pronouns are categorized according to their morphological aspects, and the syntactic behaviour of them is completely ignored.

A question which should be answered in the beginning of this thesis is whether, in our discussions, we are interested in the theory or in the description of the Persian language. The answer is that we are interested in the description of the language in the first place. But as the description of languages is conditioned by the theory, and as the theory should be tested and justified through

---

(i) Whenever I have referred to "Persian grammars" I have had the leading ones in mind. Some of them appear in the bibliography.

the structures of different languages, I can claim that all arguments which I put forward for my statements are attempts at the justification of the theory of transformational grammar and that they show whether the theory is workable or not.

Another point which might need clarification is that to the best of my knowledge no transformational approach has been made to the noun-phrase in Persian so far. Nor has any research been carried out which can be regarded as a structural approach to the noun-phrase. There is only one article on reflexive and emphatic pronouns by Moyne which is published in Language, Vol.47(1971), pp.141-163. I have discussed this article and also pointed out its shortcomings in the relevant chapter.

CHAPTER ONE

Noun-Phrase in Simplex Sentences

a: Phrase Structure (Base) Rules

In order to show the syntactic behaviour of the noun-phrase in Persian, we first set up the phrase structure (base) rules from which the underlying structure of all kinds of sentences (active, passive, complex, simplex, ... etc.) arises. Then by drawing upon different examples we will show how these sentences are derived from underlying structures by applying different transformational rules. So the list of connected transformational rules will come at the end of each section. Here are the phrase structure base rules:

$\Sigma \longrightarrow$ // S - Conjun - S //

S $\longrightarrow$ (Pre) - NP - (adv P) - VP - AUX

Pre $\longrightarrow \left\{\begin{matrix}@y@\\ imp\end{matrix}\right\}$ (neg)

NP $\longrightarrow \left\{\begin{matrix}(Det) - NP - (S)\\ NP - Conjun - NP\\ N\\ S\end{matrix}\right\}$

adv P $\longrightarrow$ adv time, adv place, adv manner

$\left\{\begin{matrix}adv\ time\\ adv\ manner\end{matrix}\right\} \longrightarrow$ (P) adv

adv place $\longrightarrow$ P - adv

VP ⟶ $\begin{cases} (\ \{NP, PP\}\ ) & - V \\ \{NP, PP, adj\ P\} & - \{bud, \&od\} \end{cases}$

PP ⟶ P - NP

adj P ⟶ adj - (S)

AUX ⟶ (Prog) - (M) - (Pre) - (Passive) - tense

M ⟶ tav@nestan, x@stan

Prog ⟶ e + bud

Passive ⟶ e + &od

tense ⟶ {present, past}

Lexical Rules:

P ⟶ be - b@ - az ... etc.

Det ⟶ in - @n - har ... etc.

N ⟶ parvin - ket@b ... etc.

V ⟶ raft - goft ... etc.

Conjun ⟶ va - amm@ ... etc.

adj ⟶ xub - sabz ... etc.

adv ⟶ emruz - inj@ ... etc.

Now we are going to show how the suggested phrase structure (base) rules generate different kinds of sentences and what the syntactic behaviour of the noun-

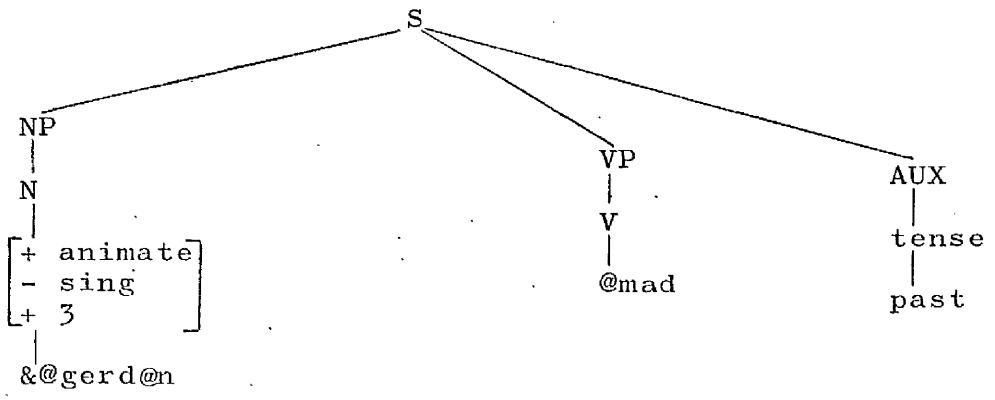
phrase is. First we start with simplex sentences whose generation need not involve many transformational rules and then we move on to more complex sentences.

b; Noun-Phrase within Simplex Sentences with Verbs other than budan and &odan[(i)]

To illustrate the syntactic behaviour of the noun-phrase within simplex sentences we first show the deep structure of a simple indicative sentence formed with an intransitive verb and show the relation between the noun-phrase and other elements of the sentence. Consider the following example:

(students) (came)
1: &@gerd@n @madand = The students came.

The deep structure of 1 is shown by P.M.1.



P.M.1.

(i) budan="to be", &odan="to become".

The features [-sing] and [+3] should be associated with the noun in the deep structure because they are properties of the noun which affect the AUX in the surface structure. The auxiliary would copy these features under certain conditions. The feature [+ animate] should be associated with the noun in order to show if the auxiliary should copy the other features of the noun (i.e. [+3] and [- sing]) or not. If the features associated with the noun are third person and the tense is past as in sentence 1., then the affix which is dominated by the auxiliary and which is to be attached to the end of the verb in the final stage would be and. If the tense is past and the features associated with a noun are [+3] and [+ sing], the affix would be zero as in 2.

(student) (came)
2: &@gerd @mad = The student came.

The following table shows the changes at the end of the verb according to the features associated with the noun in the deep structure if the tense is "simple past" or "past continuous" or "past perfect".(i)

	Singular	Plural
First person	am	im
Second person	i	id
Third person	ø	and

Table One

(i) Affixes for other tenses are exactly the same and differ only in the third person singular: For simple present tense ø becomes ad, for the present perfect tense, it becomes ast.

If the feature [+ animate] is attached to the end of the noun the auxiliary copies the features of person and number of the noun, which in the case of sentence 1 are [+3] and [- sing]; that is to say there is always concord of person and number between verb and animate noun. The following examples justify this claim:

3: man @madam = I came.

4: to @madi = You (singular)came.

5: parvin @mad = Parvin came.

6: m@ @madim = We came.

7: &om@ @madid = You (plural) came.

8: &@gerd@n @madand = The students came.

On the other hand, if the noun is inanimate, there is usually no concord of person and number between noun and the verb. Consider the following examples:

(books) (by) (men) (great)(written-became-singular)
9: (a) ket@bh@ bevasileye mard@ne bozorg neve&te-&od =
*The books was written by great men.

(books) (by) (men) (great)(written-became-plural)
(b) * ket@bh@ bevasileye mard@ne bozorg neve&te - &odand
=The books were written by great men.

(problems) (numerous) (in) (Parliament) (posed - was)
10: (a) mas@?ele bi&om@ri dar majles matrah-&od
= * Numerous problems was posed in the Parliament.

(problems) (numerous) (in) (Parliament) (posed - were)
(b) * mas@?ele bi&om@ri dar majles matrah - &odand
= Numerous problems were posed in the Parliament.

As the examples show, in sentence (a) the verb remains singular (i.e. has no suffix) in spite of the plurality of the noun; and sentence (b) in which the process of concord has taken place is ungrammatical. Although in most cases there is no concord between an inanimate noun and the verb, there are very rare cases when we see that there is such a concord. Consider the following examples:

('planes) (landed - plural)
11: (a) hav@peym@h@ forud-@madand = The 'planes landed (plural).

('planes) (landed - singular)
(b)* hav@peym@h@ forud-@mad = The 'planes landed (singular).

(cars) (fast) (were moving)
12: (a) otomobilh@ besor?at harekat-mikardand
= The cars were moving fast.

(cars) (fast) (was moving)
(b) * otomobilh@ besor?at harekat-mikard
= * The cars was moving fast.

As the examples 11 and 12 show the (a)'s are grammatical but the (b)'s are not. In (a)'s the verb is in concord of person and number with the noun and in (b)'s the verb remains singular despite the plurality of the noun. We cannot say that the nouns concerned (i.e. hav@peym@h@ ="'planes" and otomobilh@ = "cars" are used metaphorically, because if this were the case the (b)-sentences would be syntactically well formed as well. Nor can we consider the words otomabil ="car" and hav@peym@ ="'plane' as being grammatically animate because they behave as inanimate nouns in other circumstances. For

instance, neither noun can take the plural ending @n which is allocated to animate nouns. Thus we cannot have
(planes) (cars)
* hav@peym@y@n or * otomobil@n. In all the examples above, it is not the inanimate nouns themselves which are responsible for the action, but human beings, and that is why the verbs stand in concord of person and number with the noun. Consider, however, the following examples:

(due to) (earthquake) (many) (of)(mountains)(exploded - became)
13: bar-asare zelzele besy@ri az kuhh@ monfajer-&od
= Due to the earthquake, many mountains exploded (singular).

(stones) (from) (mountain)(rolled-became)
14: sangh@ az kuh sar@zir-&od
= Rocks rolled (singular)down the mountain.

In 13 and 14, where no human factor is behind the action, verbs remain singular. In such cases, pluralization of the verb can occur only when, metaphorically, a human action is attributed to an inanimate noun (see p.25). Therefore, the feature [± human factor] should he associated with the verb in deep structure in order that it is detdrmined wheather the process of concord should take place or not.

The second factor which affects the process of concord between noun and verb is the occurrence of a numeral before the noun; that is to say when NP consits of Det+NP and the determiner is a cardinal number. Before demonstrating the effect of this factor, we should clarify another point in Persian grammar, namely that in Persian the noun remains singular when it is preceded by a cardinal number. Thus we

have c@h@r &@gerd = *"four student" and haft ket@b = *"seven book", on which there is no plural affix (i.e. h@-@n) attached to the end of the noun. Phrases like * c@h@r &@gerdh@ = "four students" and *haft ket@bh@ = "seven books", in which the plural affix (i.e. h@) is attached to the end of the noun, are deviant. In such cases, the verb may be singular or plural (with no difference of meaning) if the noun is animate, and if it is inanimate the verb remains singular. Here are some examples:

(thousands) (soldier) (in) (war) (killed -
15: (a) hez@r@n sarb@z dar jang ko&te -
became-plural)
&odand

=*Thousands of soldier were killed in the war.

(thousands) (soldier) (in) (war) (killed-became-singular)
(b) hez@r@n sarb@z dar jang ko&te - &od

= * Thousands of soldier was killed in the war.

(four) (table)(in) (room) (is)
16: (a) c@h@r miz dar ot@q hast

=* There is four table in the room.

(four) (table) (in) (room) (are)
(b)* c@h@r miz dar ot@q hastand

= There are four tables in the room.

As the examples show, 15 with an animate noun can occur with a singular or a plural verb, but 16 with an inanimate noun is ungrammatical if the verb is plural as in 16(b). And because of this, we have to state in the transformational rule which we establish for concord that

the element which comes before an inanimate noun should not be a number if we are to regard the process as an obligatory one.

There is another situation which affects the process of concord between inanimate nouns and verbs. This is when the speaker uses a metaphor. Consider the following examples:

(bars of) (prison) (are talking)
17: (*) (a) mileh@ye zend@n soxan - miguyand

= The prison bars are talking.

(bars of) (prison) (is talking)
(b) mileh@ye zend@n soxan - miguyad

=*The prison bars is talking.

(as if) (stones) (Persepolis) (with) (I)
18: (*) (a) gu?i sangh@ye taxtejam&id b@ man

(were talking)
harf-mizadand = It was as if the stones of Persepolis were talking to me.

(as if) (stones) (Persepolis) (with) (I)
(b) gu?i sangh@ye taxtejam&id b@ man

(was talking)
harf-mizad =*It was as if the stones of Persepolis was talking to me.

As the examples show, the (b) - sentences are grammatical, and the (a)-sentences are deviant but acceptable under certain conditions of context of situation. In 17 and 18 , the verb is an action which applies to human beings. In other words, the speaker regards the inanimate noun as an animate one. Therefore, the verb stands in concord of person and number with the inanimate noun, and yet the sentence is acceptable. So we say that in 17(a) and 18(a) an inanimate

noun is metaphorically used as an animate noun (i.e. personification). Notice that sentences 19 and 20, in which the human action is not attributed to the nouns, are grammatical if and only if the verb remains singular.

(bars) (prison) (broken-became-singular)

19: (a) mileh@ye zend@n &ekaste-&od =*The prison bars was broken.

(bars) (prison) (broken-became-plural)

(b)*mileh@ye zend@n &ekaste-&odand = The prison bars were broken.

(stones) (cracked-singular)

20: (a) sangh@ &ek@f-bard@&t = The stones cracked.

(stones)(cracked-plural)

(b)*sangh@ &ek@f-bard@&tand = The stones cracked.

So, as we have already said, the factor which is responsible for the concord between verb and inanimate noun is the metaphorical use of the animate noun. We do not wish to regard this process as a grammatical one or include it in the transformational rule which we are going to establish for the concord between noun and verb. We prefer to regard it as a stylistic process which has nothing to do with the grammar.

Considering the grammatical factor which affects the process of concord between inanimate noun and verb (i.e. when the human being is responsible for the action which takes place) and also the factor which affects the process of concord between animate noun and verb (i.e. the occurrence of cardinal numbers before animate noun), we now set up a transformational rule which we need to apply to the deep structure of all kinds of sentences in Persian to get to the surface structure. In order to show the process,

(students)(came)
we apply it here to the sentence &@gerd@n @madand = "The students came" (whose deep structure is shown by P.M.1, p.19). We call this rule T concord. T concord is an obligatory rule and as its name suggests, it deals with the concord of person and number between noun and verb.

T concord:

$$SD = X - \left[\begin{array}{c} NP \\ Y \\ \pm \text{ cardinal number} \end{array}\right] - \left[\begin{array}{c} NP \\ N \\ \left[\begin{array}{l} \pm \text{ animate} \\ \text{PERSON} \\ \text{NUMBER} \end{array}\right] \end{array}\right] - \left[\begin{array}{c} VP \\ (NP) - V \\ \left[\begin{array}{l} + \text{ human} \\ - \text{ factor} \end{array}\right] \end{array}\right] - AUX - Z$$

$$1 - 2 - 3 - 4 - 5 - 6 - 7$$

$$SC = 1 - 2 - 3 - 4 - 5 - 6 - 7$$

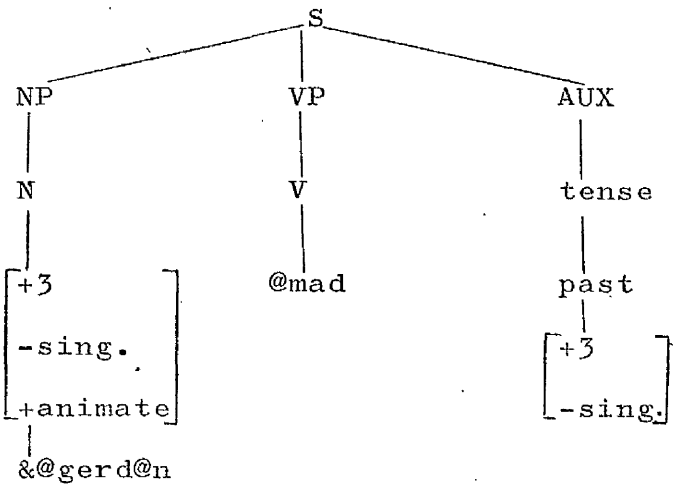
$$\left[\begin{array}{l} \text{PERSON} \\ \text{NUMBER} \end{array}\right]$$

$\Longrightarrow$ oblig

Condition: (a) 3 < [+ animate]
2 is - cardinal number
(b) 3 < [- animate]
5 < [+ human factor]

In the rule above, we split up the NP into two elements N and Y-which shows a preceding variable. This variable may be a cardinal number or another element which might occur before a noun. We are obliged to have this variable here because as we have previously said and illustrated (p.23), the occurrence or non-occurrence of the cardinal number before a noun affects the process of concord. In P.M.1 (p.19), N has the feature [+animate] attached to it and also it is not preceded by a cardinal number; so, we

have to apply T concord to it and, as a result, the auxiliary copies the features of number and person which are the properties of the noun. After applying T concord, the tree diagram which is associated with the resulting string would have the shape:



P.M.2.

The order of elements in P.M.2 is like the order of the elements in the natural sentence.

There is one point about the process of concord that we should mention here. Persian regards plants as a border line case between animate and inanimate nouns so far as the process of concord is concerned. The justification for our claim comes from the fact that concord between a plural noun denoting a plant (or parts of it) and the verb is optional. Thus we can have:

(all) (trees) (in) (spring)(green -become)

21: (a) hameye deraxth@ dar bah@r sabz- mi&avand

= All trees become green in the spring.

(all) (trees) (in) (spring) (green_becomes)
(b) haymeye deraxth@ dar bah@r sabz-mi&avad

= * All trees becomes green in the spring.

(leaves)(from)(trees) (fall)
22: (a) bargh@ az deraxt@n mirizand

= The leaves fall from the trees.

(leaves)(from) (trees) (falls)
(b) bargh@ az deraxt@n mirizad

= * The leaves falls from the trees.

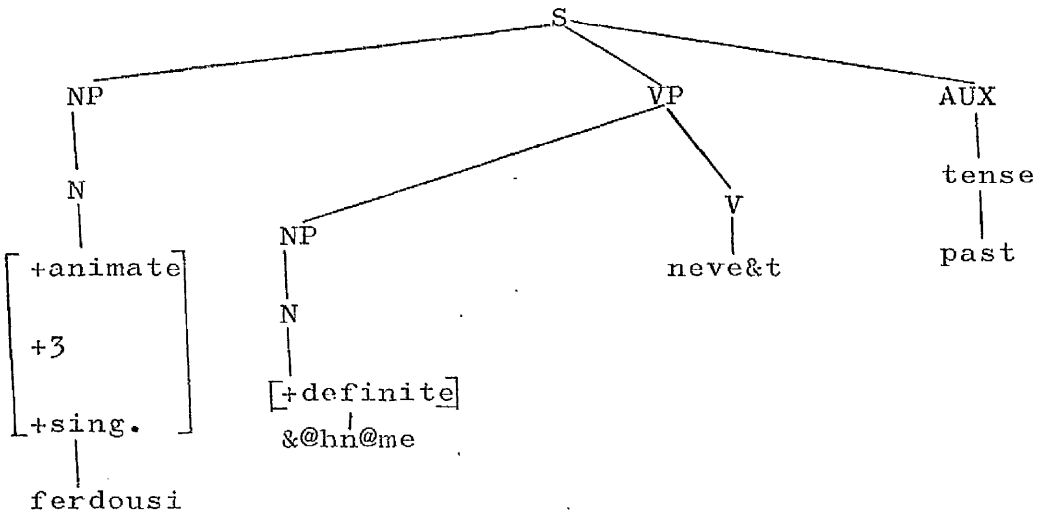
In 21(a) and 22(a), there is concord between noun and verb and in 21(b) and 22(b) there is not, and yet both sentences are grammatical. This rule does not affect the T rule which we have given for concord because whether we regard such nouns as animate or inanimate, T concord, as a device, generates grammatical sentences and prevents the grammar from generating ungrammatical ones.

Up to now, we have been discussing simplex sentences which are formed by intransitive verbs. Now we are going to discuss simplex sentences which are formed with transitive verbs, and their corresponding passive sentences. We will also show, apart from T concord, how many transformational rules are to be applied for generating them. Consider sentence 23 which is formed with the transitive verb neve&t = "$\left\{\begin{matrix}\text{he}\\ \text{she}\end{matrix}\right.$ wrote"

(Ferdousi) (Shahname) (wrote)
23: ferdousi &@hn@me r@ neve&t

= Ferdousi wrote the Shahname.

The deep structure of 23 is shown by P.M. 3 :



P.M.3.

One feature which is associated with N>NP>S in deep structure is [+ animate] which we need to know to decide whether we have to apply T concord or not. The other features(i.e. [+3], [+sing.]) are the properties of the noun which are copied by the verb in surface structure. The feature [+definite] which is associated with NP>VP>S has to be stated in the deep structure of this kind of sentence in order for us to show whether we have to apply T direct object marker (p.34) or not. In order to reach the natural sequence of elements in the surface structure, two T rules should be applied to P.M. 3 . The order of them is not crucial. One of them is T concord which we have already introduced (p.27) and the other one is T direct object marker. The marker of direct object on the surface structure is r@. if the direct object is definite and sometimes when it is indefinite, but never when it is generic(i).

(i) We have discussed the definiteness, indefiniteness and genericness of the noun under "The Three Senses of the Noun" (p.253)

Here are some examples:

(book) (bought-I)
24: ket@b r@ xaridam = I bought the book.

(glass) (from) (on) (table) (took-I)
25: liv@n r@ az ruye miz bard@&tam
= I took the glass from the table.

In 24 and 25, the direct objects (i.e. ket@b = "book" and liv@n = "glass", respectively) are definite, in 26 and 27, the direct objects (i.e. sangi = "a stone" and ket@bi = "a book") are indefinite, and in 28(a) and 29(a), the direct objects (i.e. ket@b = "book" and p@rc.e = "cloth") are generic, and we can see that there is no direct object marker after them:

(a stone) (took-I) (and) (towards) (he) (threw-I)
26: (a) sangi bard@&tam va betarafe u part@b-kardam
= I took a stone and threw it towards him.

(a stone) (took-I) (and) (towards) (he) (threw-I)
(b) sangi r@ bard@&tam va betarafe u part@b-kardam
= I took a stone and threw it towards him.

(a book)(bought-I) (and) (to) (he) (gift-did-I)
27: (a) ket@bi xaridam va be u hedye-kardam

(a book) (bought-I) (and) (to) (he)(gift-did-I)
(b) ket@bi r@ xaridam va be u hedye-kardam
= I bought a book and gave it to him as a present.

(days) (off) (book) (read-I)
28: (a) ruzh@ye ta?til ket@b mix@nam
= I read books on days off.

(days) (off) (book) (read-I)
(b) ruzh@ye ta?til ket@b r@ mix@nam
= I read the book on days off.

	(from)	(bazaar)	(cloth)	(bought-I)
29: (a)	az	b@z@r	p@rce	xaridam

= I bought cloth from the bazaar.

	(from)	(bazaar)	(cloth)		(bought-I)
(b)	az	b@z@r	p@rce	r@	xaridam

= I bought the cloth from the bazaar.

As the examples above show, in 26 and 27 , where the noun is indefinite (i is indefinite marker and is attached to the end of sang = "stone" and ket@b = "book"), the occurrence of r@ is optional(i). Thus, 26 (a) and 26 (b) have the same meaning and also 27 (a) and 27 (b) have the same meaning and they are all grammatical. In 28 (b) and 29 (b) where r@ comes after the direct objects (i.e. ket@b = "book" and p@rce = "cloth") these nouns become definite, and 28 (b) and 29 (b) have not the same meaning as 28 (a) and 29 (a), in which the nouns are used in the generic sense. In other words, 28 (b) and 29 (b) are not grammatical if we want to use the direct objects (i.e. ket@b = "book" and p@rce = "cloth") in their generic sense. We should have all these grammatical points in mind when we come to establish the T rule for producing T direct object marker. Also we should note that the direct object marker r@ comes after the NP if NP consits of N + adj or N + N, and it comes after N if NP consits of N + S in the deep structure. Consider the following sentences:

(i) We have discussed the relation of r@ with the three senses of the noun under "The Three Senses of the Noun" (p.253).

(house) (Hasan) (bought_I)

30: (a) x@neye (i) hasan r@ xaridam

= I bought Hasan's house.

(house) (Hasan) (bought_I)

(b)* x@ne (i) r@ hasan xaridam

(umbrella)(Parvin) (took-I)

31: (a) catre parvin r@ bard@&tam

= I took Parvin's umbrella.

(umbrella) (Parvin) (took-I)

(b)*catre r@ parvin bard@&tam

(house) (that) (belong to) (Hasan) (was)(bought-I)

32: (a) x@ne?i r@ ke m@le hasan bud xaridam

= I bought the house which belonged to Hasan.

(house) (that)(belong to)(Hasan)(was) (bought-I)

(b)*x@ne?i ke m@le hasan bud r@ xaridam

(umbrella)(that)(belong to) (Parvin) (was)(took_I)

33: (a) catri r@ ke m@le parvin bud bard@&tam

= I took the umbrella which belonged to Parvin.

(umbrella)(that)(belong to)(Parvin)(was) (took_I)

(b)*catri ke m@le parvin bud r@ bard@&tam

The examples 30 (a) and 31 (a) in which r@ occurs after the noun-phrase (i.e. x@neye hasan = "Hasan's house" and catre parvin = "Parvin's umbrella" respectively) are well formed, and 30(b) and 31(b) in which r@ occurs after N are ill-formed sentences. On the other hand, 32 (a) and 33(a) which have embedded sentences in their NP in the deep

---

(i) The difference between x@neye and x@ne has been discussed in Chapter Two.

structure and in which r@ occurs after N, are grammatical and 32(b) and 33(b) in which r@ occurs after relative clauses (i.e. ke (that) m@le (belong to) hasan (Hasan) bud (was) = "which belonged to Hasan" and ke (that) m@le (belong to) parvin (Parvin) bud (was) = "which belonged to Parvin" are ungrammatical.

On the basis of what we have said above, we establish T direct object marker:

$$SD = X - NP - \left\{ \begin{array}{ll} [N\ [\pm\ def]]_{NP2} & - S \\ [N\ [\pm\ def]]_{NP2} & - Y \end{array} \right\}_{NP2} - Z$$

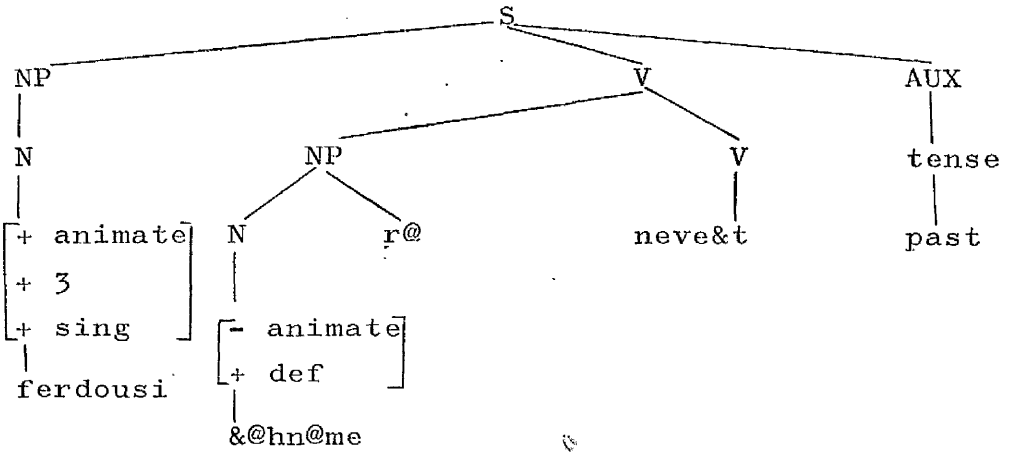
$$1 - 2 - \left\{ \begin{array}{lll} 3 & - & 4 \\ 3 & - & 4 \end{array} \right\} - 5 \Longrightarrow \left\{ \begin{array}{l} \text{oblig /3 is } [+\ def] \\ \text{optional/3 is } [-\ def] \end{array} \right.$$

$$SC = 1 - 2 - \left\{ \begin{array}{llll} 3 & - \underline{r@} - & 4 & \\ 3 & - 4 - & \underline{r@} & \end{array} \right\} - 5$$

The rule is obligatory if the direct object is definite and optional if it is indefinite. The rule also shows that we have to add r@ after the direct object if it consists of a noun plus a noun or a noun plus an adjective (we have shown this noun or adjective by Y). And if NP

denoting direct object consists of N + S, r@ should occur after N. In the case of generic nouns, as we have illustrated before, r@ should not be added.

After applying T direct object marker, the tree diagram would have the shape:



P.M.4.

At this stage, we only have to apply T concord to get the string of elements equivalent to the natural sentence ferdousi &@hn@me r@ neve&t = "Ferdousi wrote the Shahname".

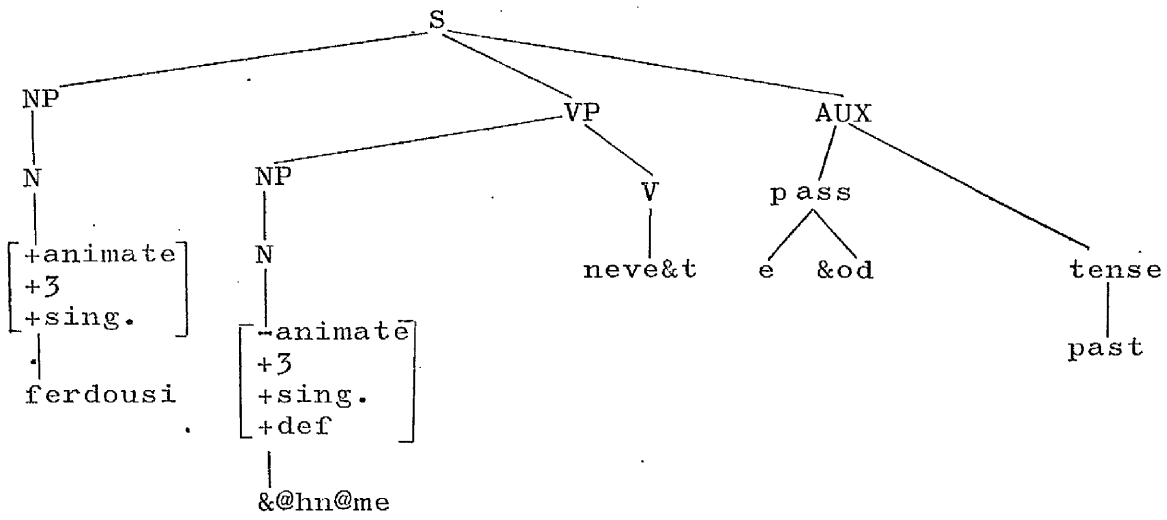
We said earlier that we were going to show the deep structure of the corresponding passive sentence of 23 (p.29)(i.e. ferdousi &@hn@me r@ neve&t = "Ferdousi wrote the Shahname") which is 34:

	(Shahname)	(by)	(Ferdousi)	(written-became)
34:	&@hn@me	bevasileye	ferdousi	neve&te-&od

= Shahname was written by Ferdousi .

We say that 34 is the corresponding passive sentence for 23 because the crucial syntactic relations between the elements are the same in both sentences. And these syntactic relations hold, of course, between those elements which are the same in each sentence so far as the meaning is concerned. By "crucial syntactic relations" we mean so-called grammatical relations such as subject-verb or object-verb. Any native speaker of Persian knows that in both sentences the one who has written something is ferdousi and also that that "something" which is the &@hn@me has been written by ferdousi. In other words, the logical subject and object of each sentence are ferdousi and &@hn@me respectively. The superficial forms of the two sentences, however, do not show that the syntactic relation between the lexical elements are the same - the syntactic relation which leads the native speakers of Persian to attributing the same meaning to both sentences. Although the sequence of elements is not the same in them (for instance, in 23 , the subject i.e. ferdousi occurs at the beginning of the sentence and in 34 it occurs at the end), the deep structure of the two sentences shows that the syntactic relation of their constituents which is crucial for revealing their meanings is the same in both sentences. The deep structure of 34 is shown by P.M.5 in which the correct meaning of the sentence, as understood by a native speaker, is associated with the

syntactic relation between its elements.



P.M.5.

By comparing P.M.3 and P.M.5, one can see that so far as the noun-phrases and their relations with the verb are concerned, the two sentences are the same. Again we insist that it is only in the deep structure that we can show that the two sentences are semantically identical in spite of their superficial differences.

In order to generate the surface structure from the underlying structure which is shown by P.M. 5 we have to apply a T rule in addition to and before T concord. We call this T passive. T passive is an obligatory rule and it should be applied when the auxiliary in the deep structure of a sentence dominates the element "passive".

T passive:

$$SD= X - NP_1 - NP_2 - V - \underset{AUX}{[}Y - \text{passive} - Z\underset{AUX}{]}$$

$$1 - 2 - 3 - 4 - 5$$

$$\Longrightarrow \text{oblig}$$

$$SC= 1 - 3 - \underline{\text{beva-sileye}} + 2 - 4 - 5$$

T passive shows that the two NP's should be transposed and the word $\underset{\underline{\text{bevasileye}}}{\overset{(\text{by})}{}}$ should be placed before 2 if 5 dominates the passive. There is one point which we have to make clear about the word $\underset{\underline{\text{bevasileye}}}{\overset{(\text{by})}{}}$. We have chosen this word to be placed before 2 because it can occur before both animate and inanimate nouns. Other lexical items which can be placed there are allotted to animate nouns or to inanimate nouns. Consider these examples:

(Shahname) (by) (Ferdousi) (written-became)

35: (a) &@hn@me bevasileye ferdousi neve&te-&od

= Shahname was written by Ferdousi.

(Shahname) (by) (Ferdousi) (written-became)

(b) &@hn@me bedaste ferdousi neve&te-&od

= Shahname was written by Ferdousi.

(house) (by) (wind) (destroyed-became)

36: (a) x@ne bevasileye b@d xar@b-&od (i)

= The house was destroyed by wind .

(house) (with) (wind) (destroyed-became)

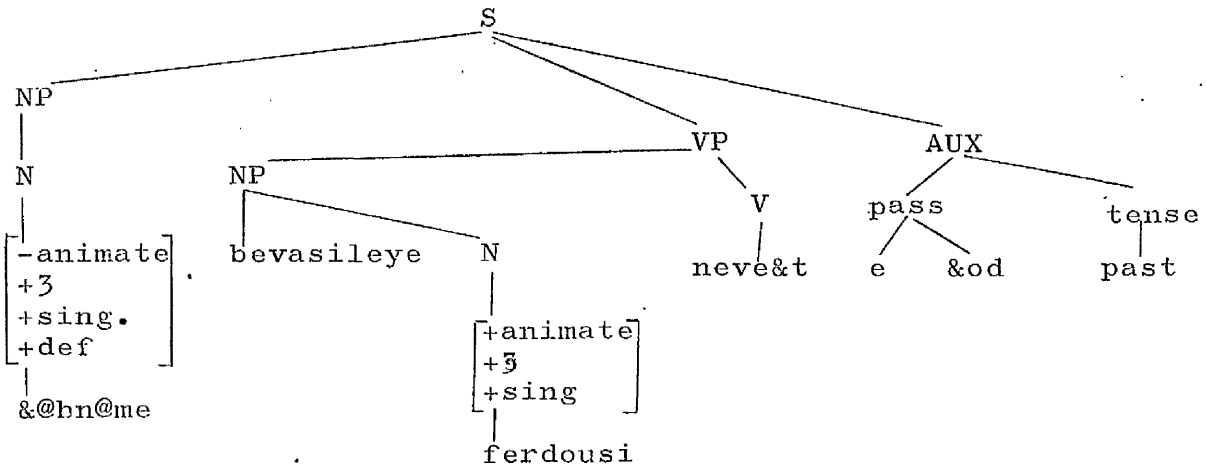
(b) x@ne b@ b@d xar@b-&od

= The house was destroyed by wind .

In addition to the words b@ , bevasileye , etc. which

(i) The auxiliary verb for forming the passive voice is →

we have used in above examples, there are other lexical items (like tavassote or az-tariqe) which one can use according to one's style. After applying T passive, the tree diagram will have the shape:



P.M.6.

→

not always the same for simple and compound verbs. With the simple verb, the verb &odan = "to become" is added to the past participle to form the passive voice, e.g. didan = "to see" ; dide-&odan = "to be seen"; hasan miko&ad = "Hasan kills" ; hasan ko&te mi&avad = "Hasan is killed". In this context, the verb ga&tan may replace &odan.

While the above process is correct in the case of compound verbs, we should, however, note that:

(a) Active compound verbs whose verbal components are kardan = "to do" or s@xtan = "to make" more usually form their passive simply by changing either of these

→

Footnote to page 38 continued:

compounds into &odan = "to become"; e.g.

xar@b-kardan = to destroy, xar@b-&odan = to be destroyed.

rah@- s@xtan = to release , rah@-&odan = to be released.

The same is true in the case of compound verbs containing the verb nemudan which originally meant "to show" but nowadays is simply a synonym of kardan = "to do":

barresi-nemud = he reviewed

barresi-&od = It was reviewed.

Similarly, it should be noted that the verb gard@nidan (being the causative version of ga&tan = {"to become" / "to turn") may be the verbal component of an active compound verb - in which case the passive voice is formed by a short cut method we have already seen:

(destroy_do.)		(destroy-do.)	(destroy-do)
vir@n-kardan	=	vir@n-s@xtan	= vir@n-gard@nidan = to destroy
(destroy-become)		(destroy-become)	
vir@n-&odan	=	vir@n-ga&tan	= to be destroyed

(b) Some compound verbs with other verbal components may also have the same short-cut process for the formation of the passive voice; e.g.:

kotak-zadan = to beat, to hit

kotak-xordan = to be beaten

tohmat-zadam = to accuse

tohmat-xordan= to be accused

ed@me-d@dan = to continue

ed@me-y@ftan = to be continued

→

Footnote to page 38 continued:

ej@ze-d@dan = to permit

ej@ze-y@ftan = to be permitted

arz@ni-d@&tan= to endow

arz@ni-&odan = to be endowed

(c) The process which was mentioned for simple verbs is, as we have already mentioned, by no means incorrect for compound verbs. Nevertheless, it is often unusual and sometimes stylistically inelegant :

(Persepolis)	(by)	(Alexander)	(destroy- done -became) vir@n -karde - &od	
taxtejam&id	bedaste	eskandar	(destroy-became) vir@n -&od	

= Persepolis was destroyed by Alexander.

Sometimes, the use of a preposition decides the form:

(Hasan)(permit found)(that)(go)

(i) hasan ej@ze-y@ft ke beravad = Hasan was permitted to go.

(to)(Hasan) (permit-given-became) (that)(go)

(ii) be hasan ej@ze - d@de-&od ke beravad

=Hasan was permitted to go .

It should be noted that in (i), hasan is the subject and the verb, strictly speaking, is an active one (i.e. to find) whereas in (ii), ej@ze = "permission" is the subject and the verb is a passive one (to be given). As this case has to do with VP, we do not wish to discuss it in detail. In the deep structure, we show that the element passive dominates e-&od.

end of footnote

At this stage, we should see whether we have to apply T concord (p.27) in order to deal with the concord of person and number between the verb and NP>S or not. And we see that the rule should not be applied because the feature [-animate] is associated with &@hn@me.

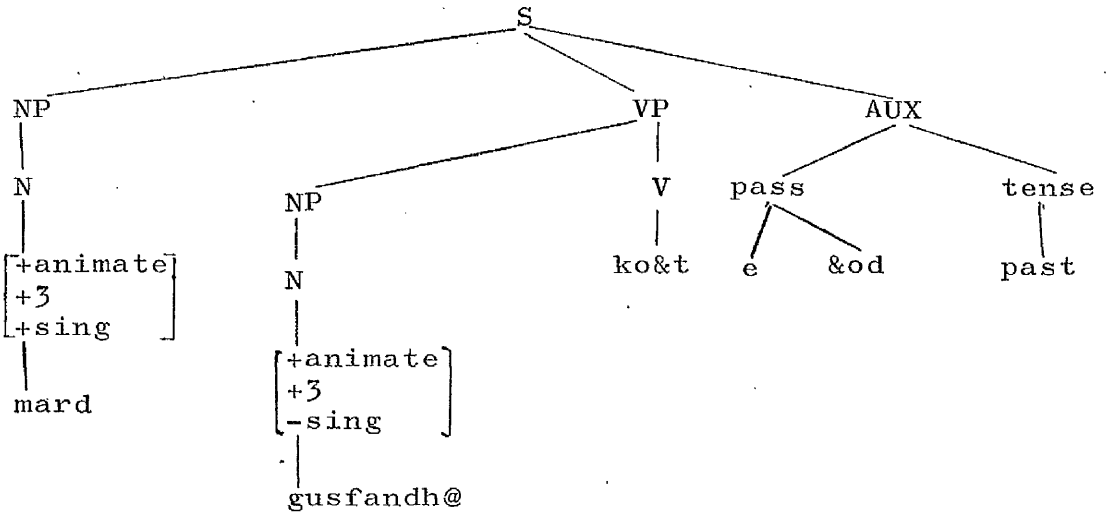
As P.M.3 shows, we have two arguments (i.e. NP which is dominated by S and NP which is dominated by VP). The place of these arguments is changed in P.M.5, i.e. the place of these arguments is not the same in active and passive sentences and this change affects the surface structure of the sentence. That is to say, the verb is in concord of person and number with the head of NP construction which is dominated by S in surface structure (i.e. the one which is dominated by VP in deep structure of the passive sentence). Because of this, the order of T passive and T concord is crucial. First we have to apply T passive and then T concord and not vice-versa ; because if we first apply T concord, the verb will stand in concord with NP which is dominated by S in deep structure and the resulting sentence will be ungrammatical. Having this point in mind i.e. that the change of place of NP's in active and passive sentences has syntactic function, we can define NP as a construction which changes its place and this affects the syntactic behaviour of another element (i.e. AUX). To clarify this point, here is an example with NP>VP which is plural. Consider the following sentence:

(sheep) (by) (man) (killed-became-plural)

37: gusfandh@ bevasileye mard ko&te-&odand

= The sheep (plural) were killed by the man.

The P.M. underlying 37 would be :

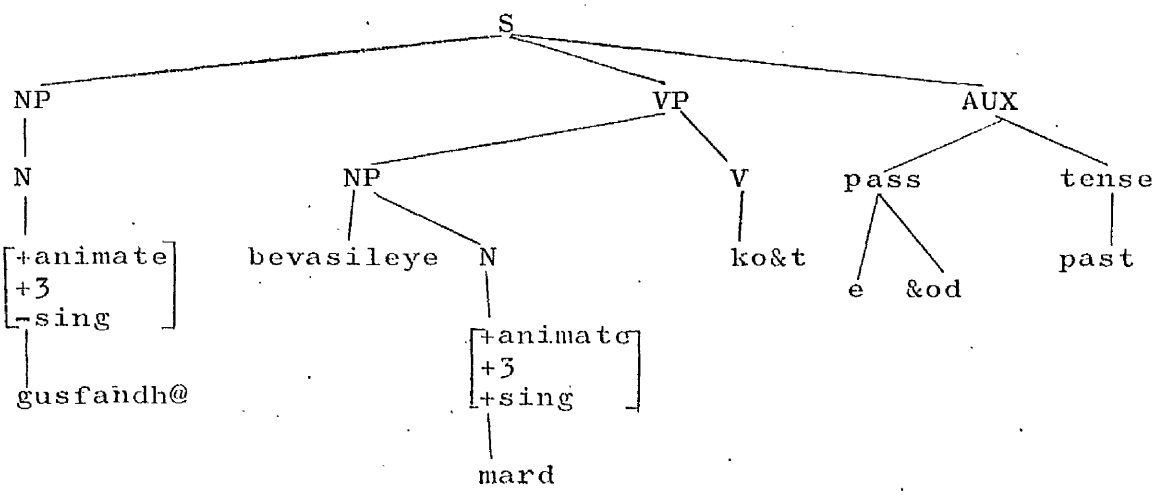


P.M.7.

First we have to apply T passive (p.38) because AUX dominates the passive. After applying it to P.M.7, the resulting string would be:

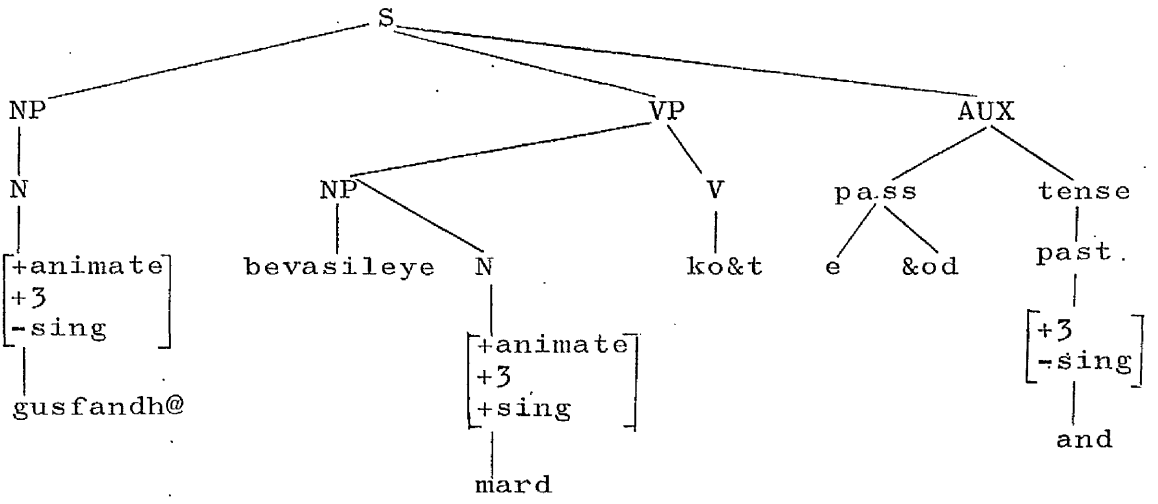
(sheep)	(by)	(man)	(killed-became_singular)
gusfandh@	bevasileye	mard	ko&te-&od

whose P.M. is shown by P.M.8 :



P.M.8.

Now we have to apply T concord (p.27) so that the AUX would copy the number and person of the noun which is dominated by S and which is third person plural. After applying T concord, the tree diagram would have the shape:



P.M.9.

The affix of the third person plural is and as it is shown in P.M.9. If we first apply T concord and then T passive the verb would stand in concord of person and number with mard = "man" which is singular and the resulting sentence would be deviant:

	(sheep)	(by)	(man)	(killed-became-singular)
38:*	gusfandh@	bevasileye	mard	ko&te-&od

38 is deviant because, in that sentence, the verb is not in concord of person and number with gusfandh@ = "sheep" (plural) which is the subject.

c: NP in Simplex Sentences formed with the Verbs budan = "to be" or &odan = "to become"

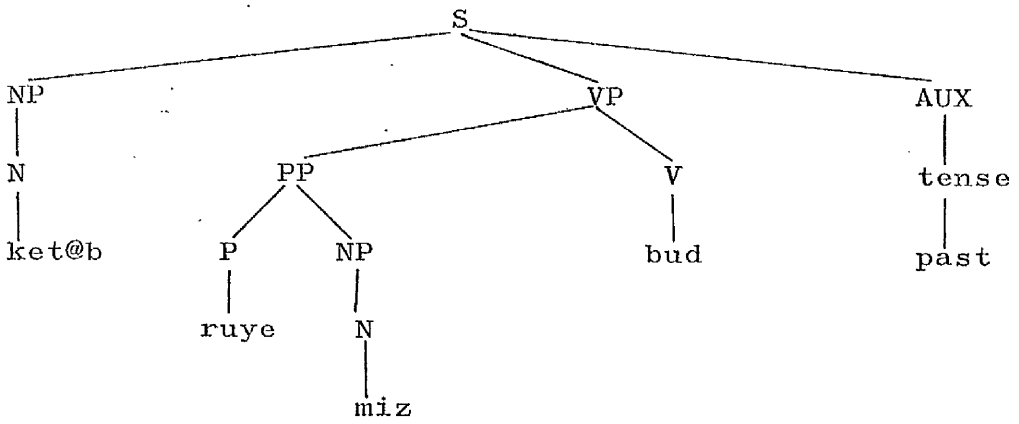
Sentences formed by the verbs budan = "to be" or &odan = "to become" differ in some respects from those formed by other verbs so far as the noun-phrase is concerned. That is why we put them in a different category and discuss them separately. As we have shown in the phrase structure (base) rules (p.18), VP in this kind of sentence may consist of prepositional phrase plus verb, or adjectival phrase plus verb or NP plus verb. Here, first we show the deep structure of each of them, then we clarify two syntactic differences which are associated with noun-phrases in this kind of sentence. Consider the following examples:

(book) (on) (table)(was)
39: ket@b ruye miz bud = The book was on the table.

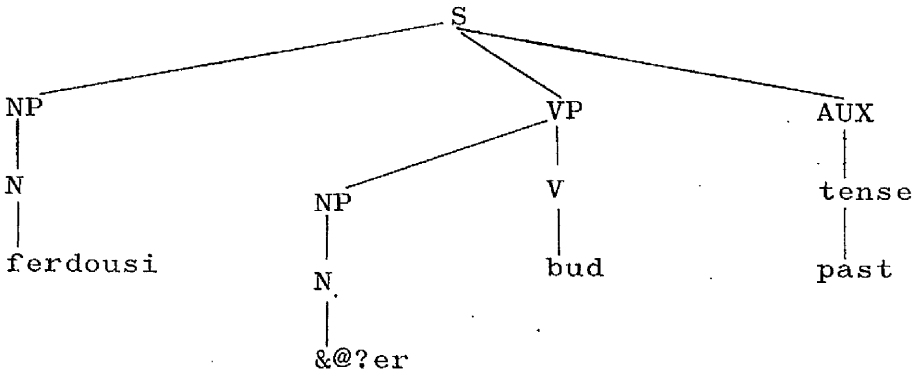
(Ferdousi)(poet) (was)
40: ferdousi &@?er bud = Ferdousi was a poet.

(weather)(good)(was)
41: hav@ xub bud = The weather was good.

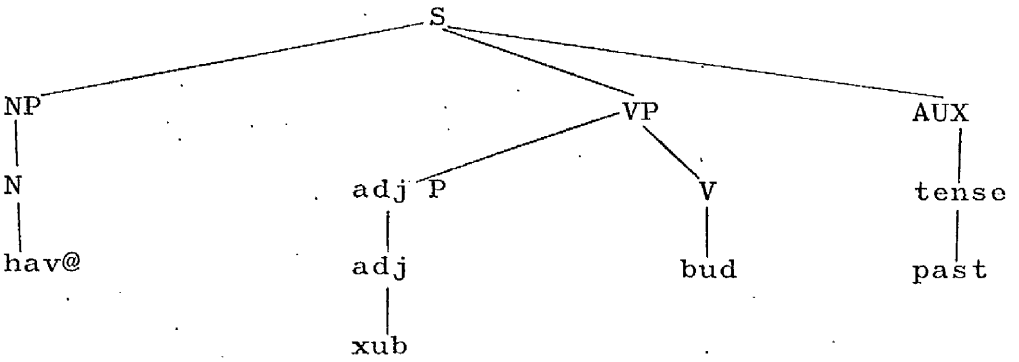
Here are the deep structures of 39, 40 and 41 which are shown by P.M.10 , P.M.11 and P.M.12 respectively:



P.M.10.



P.M.11.



P.M.12.

The only T rule which we have to apply to P.M.10,

P.M.11 and P.M.12 to come up with the surface structure is T concord, (p.27) which copies the person and number of the noun dominated by NP>S on the auxiliary.

The first difference between equational sentences formed by the verb budan or &odan and those formed by other verbs is that the noun which is dominated by VP in budan-&odan sentences should have the same form as the noun which is dominated by S so far as the singularity and plurality are concerned, but in sentences formed by verbs other than budan = "to be" and &odan = "to become", NP> VP may be plural when NP> S is singular. Consider the following examples:

(he) (learned men) (saw)
42: (a) u d@ne&mand@n r@ did = He saw the learned men.

(he) (learned man) (saw)
(b) u d@ne&mand r@ did = He saw the learned man.

(he) (learned man) (was)
43: (a) u d@ne&mand bud = He was a learned man.

(he) (learned men) (was)
(b)* u d@ne&mand@n bud =*He was learned men.

42 shows that NP>VP can be singular or plural in sentences formed by other verbs than budan and &odan. 43 shows that NP> VP should have the same form as NP> S so far as the singularity and plurality are concerned. Thus 43(b) is deviant. At the surface structure,

the formal criterion for NP which is dominated by S would be the place it occupies within the sentence. This criterion works also for NP which is dominated by VP. If the verb occurs at the end of the sentence, the word order would be $\left[_{S}\,\text{NP}\;\left[_{VP}\,\text{NP}\;-\;\text{V}\right]_{VP}\right]_{S}$ as the example 44 shows:

(man) (old) (neighbour) (we) (was)
44: marde pir hams@yeye m@ bud = The old man was our neighbour.

If, however, for stylistic reasons, the verb does not occur at the end of the sentence (as the example 45(b) shows), the NP which precedes it is the NP which is dominated by VP.

(autumn) (Tehran)(season)(beautiful) (is)
45: (a) p@?ize tehr@n fasle zib@?i ast
= Tehran's autumn is a beautiful season.

(season)(beautiful)(is) (autumn) (Tehran)
(b) fasle zib@?i ast p@?ize tehr@n
= Tehran's autumn is a beautiful season.

In 45(b), the verb does not occur at the end of the sentence; so $\underline{\text{fasle zib@?i}}^{\text{(season)(beautiful)}}$ = "a beautiful season" which occurs before it is NP>VP and $\underline{\text{p@?ize tehr@n}}^{\text{(autumn)(Tehran)}}$ = "Tehran's autumn" which occurs after it is NP which is dominated by S.

The second point which we have to clarify is that there is one difference between the sentences formed by the verbs budan="to be" and &odan="to become" and those formed by other verbs, if they are complex in their deep structures. We will discuss this point under the heading of "Complex Sentences" after explaining the deep structure of complex sentences which are formed by verbs other than budan="to be" and &odan="to become".

d: NP in Interrogative Sentences

So far, we have discussed the underlying structures of simplex declarative sentences. Now we are going to deal with simplex interrogative ones. There are two kinds of interrogative sentences:

(a) Those which can be answered by "yes" or by "no". In line with the usual practice, we call them yes-no interrogative sentences.

(b) Those which cannot be answered in this way and in which an interrogative adverb (such as key = "when?", cetour = "how?") or the interrogative pronoun (ke = "who?")is incorporated. We refer to this latter group as @y@.k.c. sentences. We have chosen the abbreviation k. c. for reference to all interrogative adverbs and the interrogative pronoun because they all begin with one of these two consonants.

1

Yes-No Question Sentences

In yes-no question sentences, the clue which enables one to distinguish declarative sentences from interrogative ones is intonation. Sometimes we put @y@ in front of the interrogative sentences. Thus 46 is the interrogative counterpart of 47 .

(today)(to) (school) (are going-you)
46: @y@ emruz be madrese miravi ? = Do you go to school today?

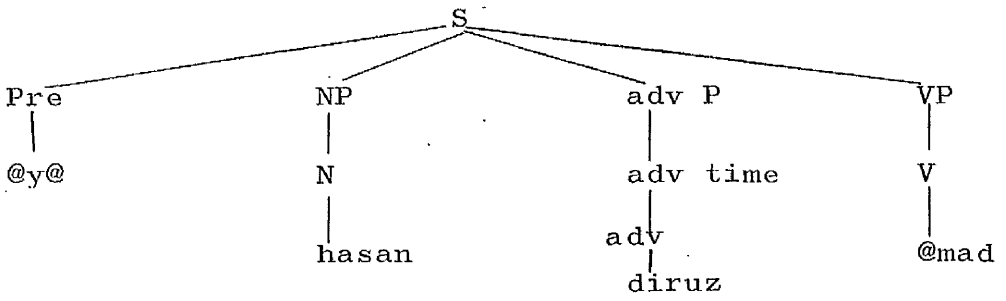
(today) (to) (school) (are going-you)
47: emruz be madrese miravi = You go to school today.

But the presence of @y@ has no effect upon other elements of the sentence. It does not affect the order of the words in deep structure and it does not cause any change at the end of elements of the sentence. We write @y@ into deep structure to account for the fact that the sentence is a question and should be spoken with interrogative intonation. So the occurrence of @y@ in deep structure triggers off the interrogative intonation, and an optional T rule would allow for its deletion. To illustrate this state of affairs we show the deep structure of the sentence 48.

(Hasan)(yesterday)(came)

48: hasan diruz @mad = Did Hasan come yesterday?

The phrase marker associated with the deep structure of 48 would be:



P.M.13.

An optional T rule which we call T @y@ deletion would omit the element @y@ from P.M.13.

T @y@ deletion:

SD = @y@ - X

1 - 2

$\Longrightarrow$ optional/ not preceded by k. c. copying.

oblig / it is preceded by k. c. copying.

SC = Ø - 2

X in the rule above shows the rest of the sentence. As the rule shows, by preserving @y@ in surface structure or by omitting it, no change takes place in the elements of the rest of the sentence. T @y@ deletion is optional if it is not preceded by T k.c. copying (i.e. if the interrogative sentence is yes-no interrogative). However,

if T k.c. copying has been operated before T @y@ deletion (i.e. if the sentence is formed by an interrogative adverb or pronoun), we have to delete @y@ to prevent the grammar from generating such sentences as * (where)(had gone -he) @y@ koj@ rafte-bud ="Where had he gone?".

The difference between interrogative sentences as a whole and other kinds of sentences (declarative, etc.....) is that the former cannot be embedded in other sentences. Thus 49 is deviant:

	(I)	(to)	(Parvin)	(that)	(whether)	(to)	(house)	(we)
49 : *	man	be	parvin	ke	@y@	be	x@neye	m@
	(come-she)	(said-I)	(that)	(to)	(journey)	(go-I)		
	mi?@yad	goftam	ke	be	safar	miravam		

2

@y@.k.c. Sentences

As we mentioned before, we call sentences which are formed by interrogative adverbs (key = "when", cetour = "how", etc.) or by the interrogative pronoun (ke ="who") @y@.k.c. sentences to show that this kind of sentence is different from yes-no question sentences. We call key = "when", cetour = "how" etc... interrogative adverbs because they can be replaced by adverbs and also they introduce a question. Thus we can have (he)(when)(came) u key @mad = "When did he come?" and then replace key = "when" by one of the adverbs of time, and have (he)(night)(came) u &ab @mad

= "He came at night". Therefore, in the deep structure, they are dominated by adverbial phrases because when a native speaker of Persian asks, for instance, (he) (when) u key (came) @mad = "When did he come ?" or (he)(how) (came) u cetour @mad = "How did he come ?", he is asking about the time or the manner of the action concerned.

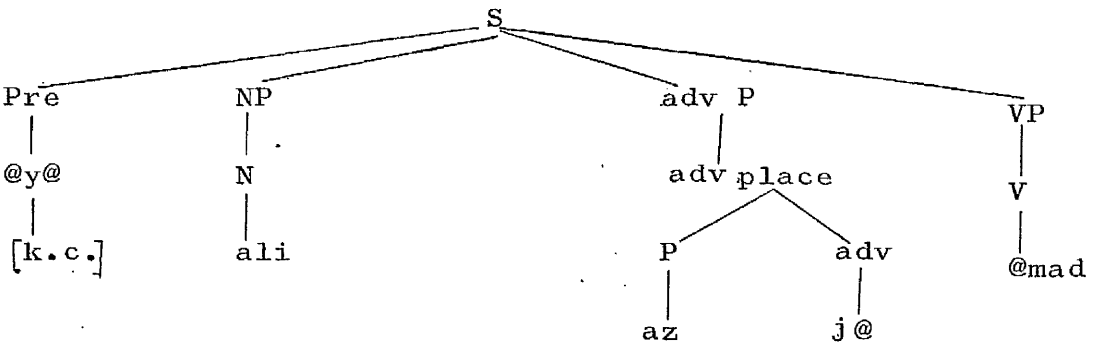
We call ke = "who" an interrogative pronoun because it can be replaced by a noun-phrase and introduces a question. Thus we can ask (yesterday) diruz (who)(to) (house) (you) (came) ke be x@neye to @mad = "Who came to your home yesterday?" and receive the reply (yesterday) (Parvin) diruz parvin (to) (house) (I) (came) be x@neye man @mad = "Parvin came to my home yesterday". And also we can ask (yesterday)(who) diruz ke r@ (saw-you) didi = "Whom did you see yesterday?" and receive the reply (yesterday)(Parvin) (saw-I) diruz parvin r@ didam = "I saw Parvin yesterday". In other words, in sentences which contain interrogative pronouns, there is a question about the subject or the object of the sentence. So ke stands in place of NP when NP is being queried by the speaker.

Considering these facts, we can see that in the case of @y@.k.c. sentences, we are confronted by two kinds of deep structures. One shows that the question is about an adverb and the other shows that the question

is about a noun-phrase. There are also two T rules involved, one for generating sentences with interrogative adverbs, and one for generating sentences with interrogative pronouns. Here are some examples. The deep structure of sentence 50 is shown by P.M.14.

(Ali) (from) (where)(came)

50: ali az ko j@ @mad = Where did Ali come from?



P.M.14.

We suggest that [k.c.] be regarded as a feature for the sentence. This feature illustrates that the interrogative sentence is not a yes-no question sentence and that there is a question about time, place, etc... The occurrence of an adverbial phrase (which dominates adverb of place) in P.M.14 and the occurrence of @y@ (while feature [k.c.] is attached to it) as a pre-sentence show that the question is about place. Both factors should be present if this is to be shown.

At the next stage, adverb of place would copy the feature associated with @y@. Here is the T rule which produces this process.

T k.c. copying :

$$SD = Pre - NP - \left[(P) - adv\right] - X$$

$$[k.c.] \qquad \text{adv place} \quad \text{adv place}$$

$$\Longrightarrow \text{oblig}$$

$$1 - 2 - 3 - 4 - 5$$

$$SC = 1 - 2 - 3 - 4 - 5$$

$$[k.c.]$$

Condition: $4 <$ (place) j@ - (time) vaqt - (manner) tour - (reason) dalil

In the rule above, X denotes the rest of the sentence. The condition imposed upon this rule shows that the adverb would copy the feature associated with the pre-sentence if it dominates j@ = "place", vaqt = "time", tour = "manner", dalil="reason". This condition allows the grammar to generate sentences with interrogatvie adverbs. And also it prevents the adverb from copying the feature [k.c.] when the feature should be copied by NP - in other words when the grammar has to generate sentences, with an interrogative pronoun, in which we have adverbial phrases as well:

(who)(from)(Tehran) (came)

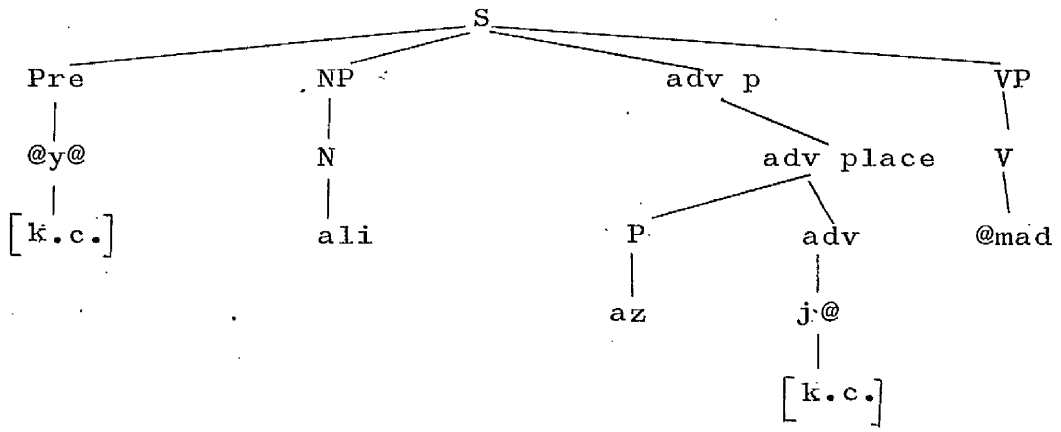
51: ke az tehr@n @mad = Who came from Tehran?

In the T rule for k.c. copying, we split up

the adverbial phrase into two elements and put the preposition into parentheses to show that the adverb may or may not be preceded by a preposition. 52 shows the kind of sentence in which there is no preposition before the adverb:

(Ali) (where)(went)
52: ali koj@ raft = Where did Ali go?

Now, let us return to P.M.14. After applying T k.c. copying, P.M. 14 would have the shape:



P.M.15.

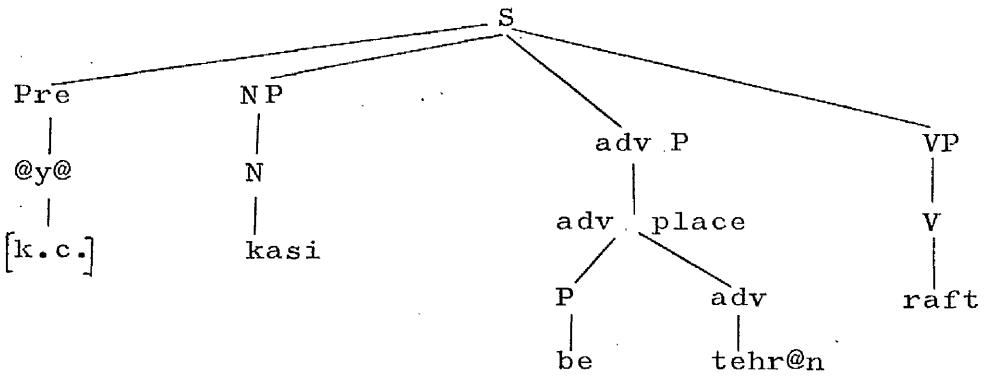
Now we can apply T @y@ deletion (p.51) for the omission of @y@. At this stage, the task of syntactic component of the grammar is ended. After this stage, a morphological rule is needed to convert j@ plus the feature [k.c.] to koj@="where" or, if there is adverb of time, to convert it to cevaqt = "when" and so on.

For generating sentences with interrogative pronouns, the

transformational rule is different from that involved in the generation of sentences with interrogative adverbs. Here is an example: The deep structure of 53 is shown by P.M.16.

(who) (to) (Tehran) (went)

53: {cekasi be tehr@n raft = Who went to Tehran?
{ke



P.M.16.

First we apply T k.c. copying (NP).

T k.c. copying (NP):

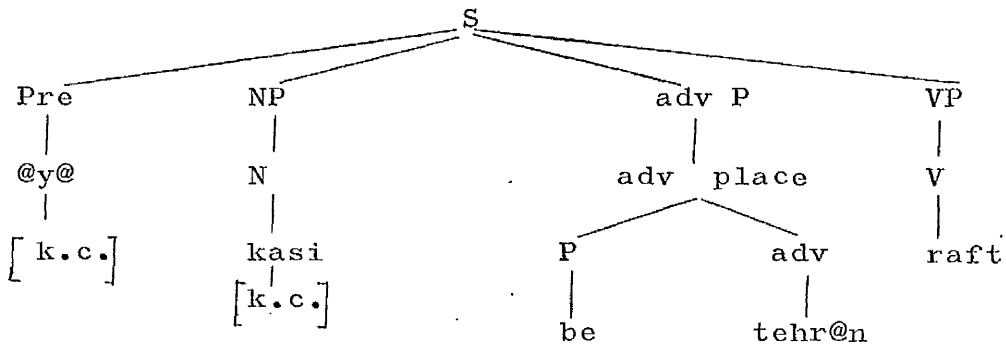
SD = @y@ - X - NP - Y
[k.c.]
1 - 2 - 3 - 4 ═══ oblig

SC = 1 - 2 - 3 - 4
[k.c.]

Condition: 3<kasi

The rule shows that if 3 dominates kasi = "someone", T k.c. copying (NP) should be applied by which NP would copy the feature associated with @y@.

After applying T k.c. copying (NP) to P.M.16, we would have P.M.17.



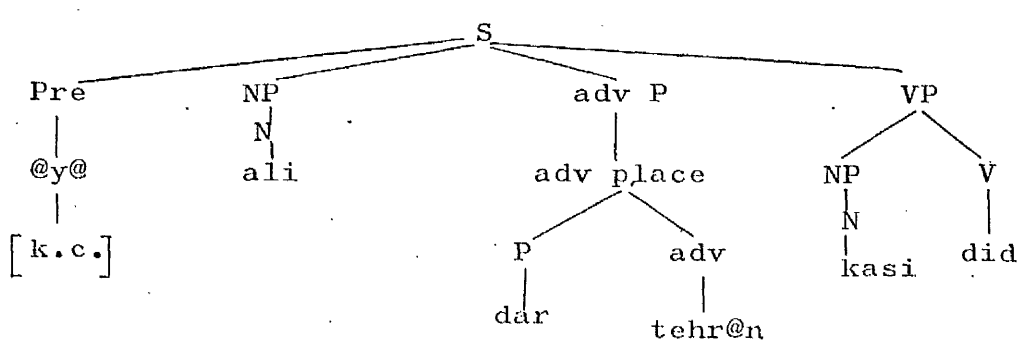
P.M.17.

At this stage, T @y@ deletion can be applied and then a morphophonic rule is needed to change kasi plus k.c. to ce kasi = "who" or ke="who".

X in T k.c. copying (NP) might be NP - adv P. In this case, it illustrates the structure of such sentences as 54:

(Ali) (in) (Tehran) (who) (saw)
54: ali dar tehr@n cekasi r@ did = Whom did Ali see in Tehran?

The tree diagram associated with the deep structure of 54 would be:



P.M.18.

The difference between P.M.16 and P.M.18 is that in P.M.16 the interrogative pronoun is dominated by NP$\geq$S and in 18 the interrogative pronoun is dominated by NP$\geq$VP.

List of Transformational Rules introduced in Chapter One

1: T concord:

$$SD = X - \left[\begin{matrix} Y \\ \pm\text{cardinal} \\ \text{number} \end{matrix}\right]_{NP} - \left[\begin{matrix} N \\ \pm\text{animate} \\ \text{PERSON} \\ \text{NUMBER} \end{matrix}\right]_{NP} - \left[\begin{matrix} (NP) - V \\ \left[\pm\text{human factor}\right] \end{matrix}\right]_{VP} - AUX - Z$$

$$1 - 2 - 3 - 4 - 5 - 6 \quad 7$$

$$\Longrightarrow \text{oblig}$$

$$SC = 1 - 2 - 3 - 4 - 5 - \left[\begin{matrix} \text{PERSON} \\ \text{NUMBER} \end{matrix}\right] \quad 7$$

Condition: (a) 3 $<$ [+ animate]
2 is - cardinal number

(b) 3 $<$ [- animate]
5 $<$ [+ human factor]

2: T direct object marker:

$$SD = X - NP - \left\{\begin{matrix} \left[\begin{matrix} N \\ [\pm\ \text{def}] \end{matrix} - S\right]_{NP_2} \\ \left[\begin{matrix} N \\ [\pm\ \text{def}] \end{matrix} - Y\right]_{NP_2} \end{matrix}\right\} - Z$$

$$1 - 2 - \left\{\begin{matrix} 3 - 4 \\ 3 - 4 \end{matrix}\right\} - 5$$

$$\Longrightarrow \text{oblig}/\begin{matrix} 3 \text{ is} \\ [+\text{definite}] \end{matrix} \quad \text{optional}/3 \text{ is}$$

$$SC = 1 - 2 \begin{Bmatrix} 3 - \underline{r@} - 4 \\ 3 - 4 - \underline{r@} \end{Bmatrix} - 5$$

3: T passive:

$$SD = X - NP_1 - NP_2 - V - \underset{AUX}{[}Y - passive - Z.\underset{AUX}{]}$$

1 - 2 - 3 - 4 - 5

SC= 1 - 3 - <u>beva</u> ~ <u>sileye</u> - 2 - 4 - 5 $\Longrightarrow$ oblig

4: T k.c. copying:

$$SD = \underset{[k.c.]}{Pre} - NP - \underset{adv\ place}{[(P)} - \underset{adv\ place}{adv]} - X$$

1 - 2 - 3 - 4 - 5

SC= 1 - 2 - 3 - 4 - 5 $\Longrightarrow$ oblig

[k.c.]

Condition: 4 < (place)(time)(manner)(reason)
<u>j@</u> - <u>vaqt</u> - <u>tour</u> - <u>dalil</u>

5: T k.c. copying (NP):

$$SD = \underset{[k.c.]}{\underline{@y@}} - X - NP - Y$$

1 - 2 - 3 - 4

SC= 1 - 2 - 3 - 4 $\Longrightarrow$ oblig.

[k.c.]

condition: 3 < <u>kasi</u>

6: T @y@ deletion:

SD = <u>@y@</u> - X

1 - 2

SC = Ø - 2 $\Longrightarrow$ optional/ not preceded by <u>k.c. copying.</u>

oblig/ it is preceded by <u>k.c. copying.</u>

CHAPTER TWO

NP in Complex Sentences

In Chapter One, we discussed simplex sentences and connected transformational rules. Now we are going to show the deep structures of complex sentences i.e. sentences which have embedded sentences in them. We will discuss various types of complex sentences and the syntactic status of NP in them. First, we will discuss those complex sentences in which the embedded sentences appear as restrictive relative clauses which, in turn, form an underlying structure for NP constructions .

In the second section of this chapter, we show the deep structures of appositional sentences and the differences between their deep structures and those of sentences containing restrictive relative clauses. In the third part of this chapter, we discuss complements i.e. when NP dominates S and only S.

a: NP Constructions with Restrictive Relative Clauses in their Deep Structures

In surface structure, an NP construction may consist of N + N or N + adj. Consider the following examples:

(student) (good) (came)

1: &@gerde xub @mad = The good student came.

(overcoat) (girl) (took - I)

2: p@ltoye doxtar r@ bard@&tam = I took the girl's overcoat.

In 1, NP construction (i.e. &@gerde xub) consists of N + adj and in 2, NP construction (i.e. p@ltoye doxtar = "overcoat of the girl") consists of N + N. The native speakers of Persian would interpret 1 as 3 and 2 as 4 :

(student)(that)(good) (was) (came)

3: &@gerdi ke xub bud @mad = The student who was good came.

(overcoat) (that)(belong to)(girl) (was) (took-I)

4: p@lto?i r@ ke m@le doxtar bud bard@&tam = I took the overcoat which belonged to the girl.

On the basis of this interpretation, we consider 3 as the underlying structure of 1 and 4 as the underlying structure of 2. The deep structures of 1 and 3 are the same; so are the deep structures of 2 and 4. We need to show the syntactic relation between elements of phrases like 5 and 6 through their deep structures.

(student)(good)

5: &@gerde xub = the good student.

(overcoat) (girl)

6: p@ltoye doxtar = the overcoat of the girl.

Although 5 and 6 are not ambiguous, there are

similar phrases (i.e. those which are formed by N + N or N + adj) which are ambiguous. Consider the following examples:

7: {woman / wife} (singer) (came) = {(a) The wife of the singer came. / (b) The woman singer came.}

zane x@hande @mad

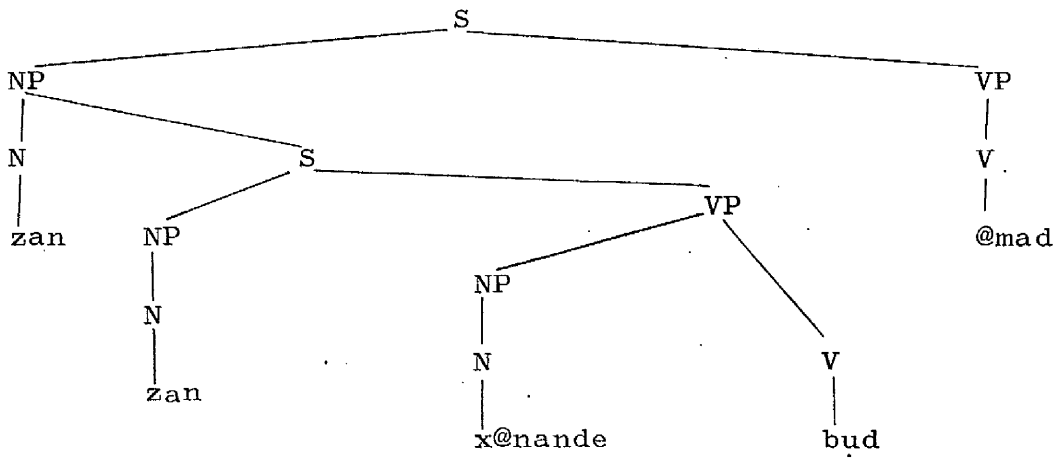
8: {girl / daughter} (neighbour)(to) (trip)(went) = {(a) The girl next door went on a trip. / (b) The neighbour's daughter went on a trip.}

doxtare hams@ye be safar raft

As the English translations of 7 and 8 show, the native speakers of Persian interpret each in two ways, and this shows that there are two different syntactic relations which are associated with two different interpretations. Two factors cause the ambiguity of 7 and 8 . The first is the lexical ambiguity of the nouns zan and doxtar. In other words, two meanings can be associated with each of the two lexical items zan and doxtar. The former means "woman" or "wife", and the latter means "girl" or "daughter". The second is that the nouns x@nande = "singer" and hams@ye = "neighbour" can stand in place of nouns they define. In other words, they are self defining. Thus we can have x@nande = "singer", instead of marde x@nande = "the man singer", or zane x@nande = "the woman singer". And also we can have hams@ye = "neighbour", instead of marde hams@ye = "the man next door" or zane hams@ye = "the woman next door". So the combination of the two factors which we have mentioned above causes the ambiguity of 7 and 8 . If only one of the two factors were involved, the phrase would

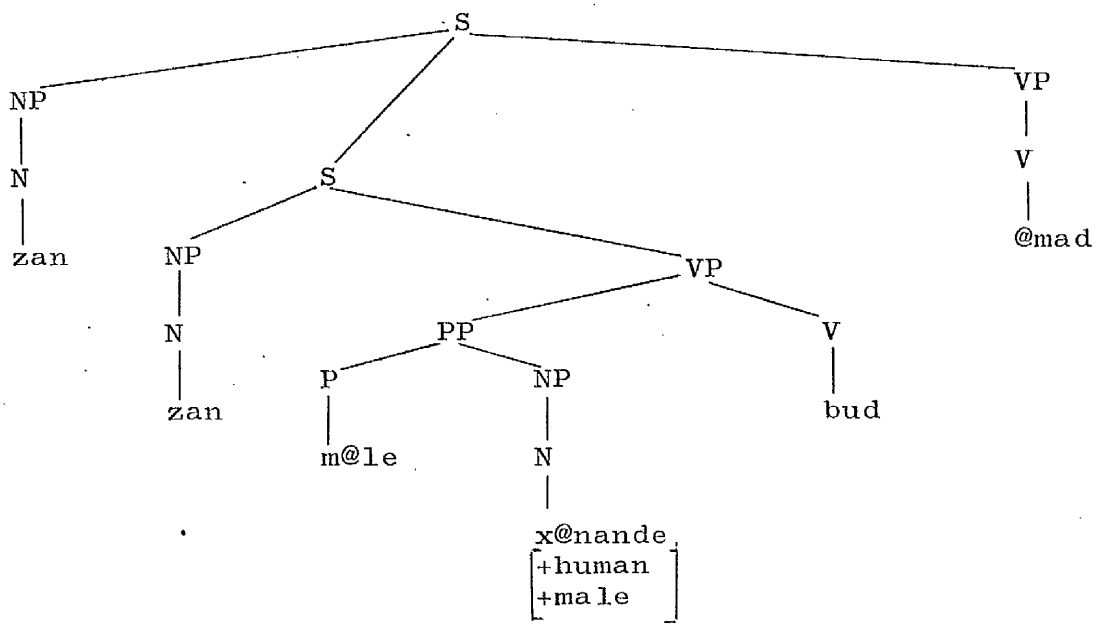
not be ambiguous. Thus zane man = "my wife" and deraxte hams@ye = "the neighbour's tree" are not ambiguous when in the former the second factor and in the latter the first factor are omitted.

Here is the P.M. associated with the interpretation of 7 as it is shown by (b) (i.e. "The woman singer came").



P.M.1.

And the P.M. associated with the deep structure of the first interpretation (i.e. "The wife of the singer came") would be:



P.M.2.

When native speakers of Persian interpret zan as a wife, the interpretation of x@nande is marde x@nande = "the man.singer". As we would not be justified in putting the word mard="man"as a lexical item in deep structure, instead of that we associate the features [+ male] and [+ human] with the noun.(i) The noun mard="man" is, however, omitted from the surface structure. In P.M. 1, zan is interpreted as "woman" and x@nande = "singer" is the noun which defines it.

In order to get the surface structure from P.M. 1, we first apply T relative clause formation (restrictive) to attach i which is the marker of restrictive clause(ii)

(i) We will discuss the occurrence of the lexical item m@le = "belong to" in deep structure on p.79 .

(ii) We will discuss the occurrence of i as a marker of restrictive clause and the difference between restrictive and non-restrictive clauses on p.83 .

to the end of the noun-phrase dominated by S in the matrix sentence and also add the element ke, which is a conjunction, after the same phrase.

T relative clause formation (restrictive):

$$SD = X - \left[\begin{matrix}NP\\NP\end{matrix} - \left[\begin{matrix}NP\\S\end{matrix} - \left\{\begin{matrix}NP\\adj\ P\\PP\left[\begin{matrix}P\text{-}NP\\PP\end{matrix}\right.\end{matrix}\right\} - Y\right]_{S}\right]_{NP} - Z$$

$$1 - 2 - 3 - 4 - 5 - 6 \Longrightarrow \text{oblig}$$

$$SC = 1 - 2 + \underline{i} - \underline{ke} - 3 \begin{pmatrix} +\underline{i} \text{ if } 5 \text{ is } \underline{budan} \\ \text{or } \underline{\&odan} \end{pmatrix} - 4 \begin{pmatrix} +\underline{i} \text{ if } 5 \text{ is not } \underline{budan} \\ \text{or } \underline{\&odan} \end{pmatrix} - 5 - 6$$

Condition: (a) if 5 is budan or &odan, 2 and 3 must be identical and coreferential .

(b) if 5 is not budan or &odan, 2 and 4 must be identical and coreferential .

T relative clause formation (restrictive) is an obligatory rule and as the condition imposed on it shows, it can be applied if NP in the matrix sentence is identical and coreferential to the NP in the embedded sentence.

There are some points which should be clarified about T relative clause formation (restrictive). First, T relative clause formation (restrictive) generates five kinds of sentences. As the rule shows, the element 4 offers three options (i.e.NP, adj P, PP). In sentence 9 the element 4 is an NP (i.e. x@nande ="singer" and Y is budan.

(woman)(that) (singer)(was)(came)

9: zani ke x@nande bud @mad = The woman who was a singer came.

However, in sentenses like 10(a)and 10(b), the element 4. is an adjectival and a prepositional phrase respectively, and Y is budan.

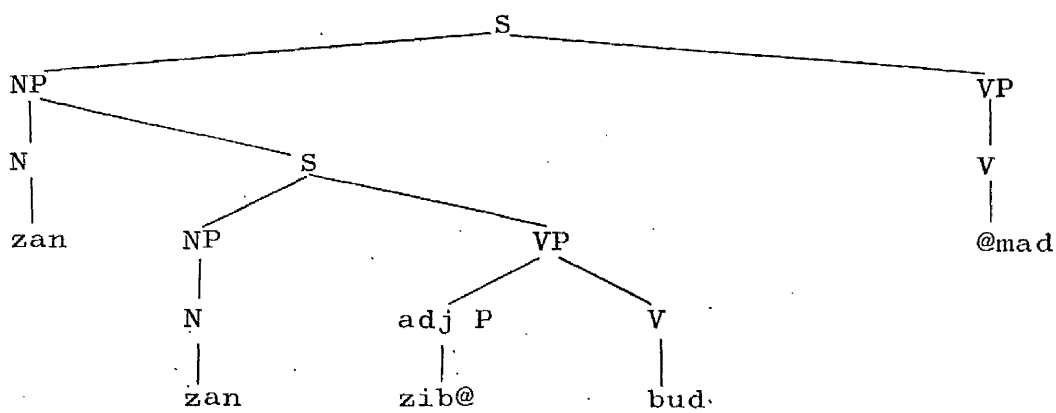
(woman) (that) (beautiful) (was) (came)

10(a): zani ke zib@ bud @mad = The woman who was beautiful came.

(woman)(that)(belong to)(man) (was) (came)

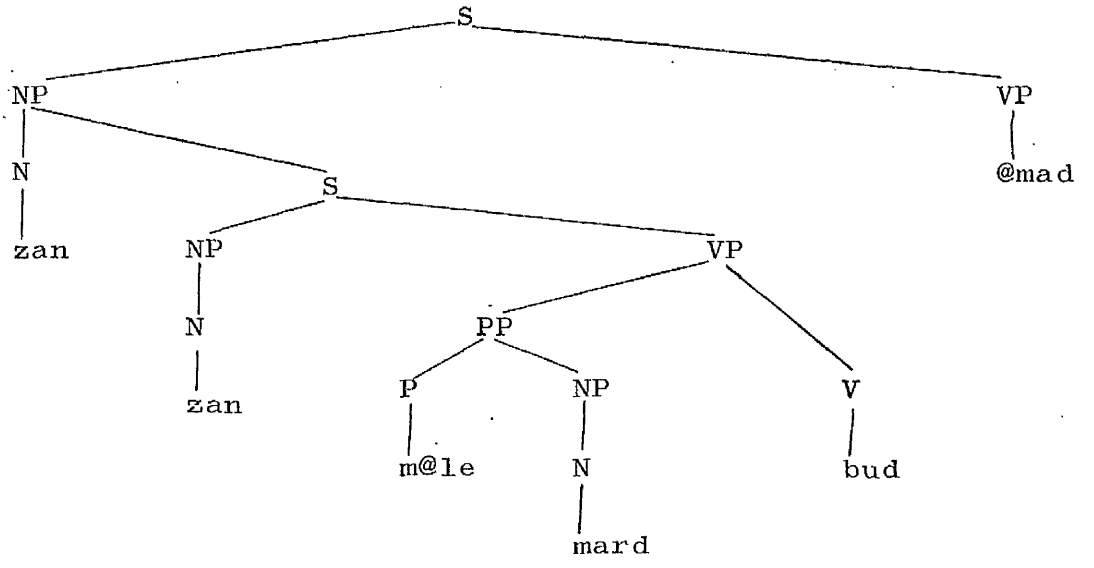
(b): zani ke m@le mard bud @mad = The woman who belonged to the man came.(i)

The phrase markers associated with the deep structures of 10(a) and 10(b) would be P.M.3 and P.M.4 respectively.



P.M.3.

(i) The lexical item m@le does not necessarily denote possession. It may, as in this case, refer to allocation or association.



P.M.4.

Condition (a) which is imposed upon T relative clause formation (restrictive) deals with the structures of embedded sentences formed by the verbs budan and &odan (i.e. when Y is budan or &odan). However, if Y is a verb other than budan and &odan, then the NP of the embedded sentence, which is identical and co-referential to the NP of the matrix sentence, is either NP>VP or NP>PP (both shown by the element 4 in the rule). If NP of the matrix sentence is identical and coreferential to the NP>VP of the embedded sentence, the rule generates such sentences as (girl) (beautiful) doxtare zib@?i (that)(like-her - you)(came) ke dusta&-d@ri @mad = "The beautiful girl whom you like came" (the deep structure of this sentence is shown on p. 154). However, if NP of the matrix sentence is identical and coreferential to NP>PP, the rule generates such sentences as (man) (learned) (that) marde d@ne&mandi ke

(with)(he) (familiar-you-are)(came)
b@ u @&en@?i @mad = "The learned man with whom you are acquainted came" (the deep structure of this sentence is shown on P. 161).

The second point about T relative clause formation (restrictive) is that ke is a conjunction and not a relative pronoun, as regarded by previous grammarians. ke is regarded as a relative pronoun in the traditional grammars of Persian, and also in grammars written by non-native speakers like Lambton(i). We will illustrate now that this is not so, and that ke is not equivalent to "who" or "whom" in English. Consider the following examples:

(brother) (I) (that) (like_you) (came)
11:*(a) bar@dare man ke dust-d@ri @mad

(brother) (I) (that)(like-him-you) (came)
(b) bar@dare man ke dusta&-d@ri @mad
= My brother, whom you like, came.

(brother) (I) (that)(he) (like-you) (came)
(c) bar@dare man ke u r@ dust-d@ri @mad
= My brother, whom you like, came.

(daughter)(I) (that)(have seen-you) (here) (is)
12:*(a) doxtare man ke dide?i inj@ ast

(i) The only exception is V.S.Rastorgueva, A Short Sketch of the Grammar of Persian, P. 58, who has called ke a subordinating conjunction, but has not justified his point.

(daughter)(I) (that)(have seen-you-her) (here)(is)

(b) doxtare man ke dide?ia& inj@ ast (i)

= My daughter whom you have seen is here.

(daughter)(I) (that)(she) (have seen-you)

(c) doxtare man ke u r@ dide?i

(here)(is)

inj@ ast = My daughter whom you have seen is here.

(Parvin)(that) (with)(familiar-you-are) (to) (house)

13:*(a) parvin ke b@ @&en@?i be x@neye

(we) (comes)

m@ mi?@yad

(Parvin)(that)(with-her)(familiar-you-are)(to)(house)

(b) parvin ke b@h@& @&en@?i be x@neye

(we) (comes)

m@ mi?@yad (i) = Parvin, with whom you are acquainted, is coming to our home.

(Parvin) (that)(with)(she)(familiar-you-are)(to)

(c) parvin ke b@ u @&en@?i be

(house) (we) (comes)

x@neye m@ mi?@yad = Parvin, with whom you are acquainted, is coming to our home.

As the examples show, 11(a), 12(a) and 13(a) in which there is no pronoun after ke are deviant. On the other hand, 11(b) and 11(c) and also 12(b) and 12(c) and 13(b) and 13(c), in which the bound form of the pronoun (i.e. a&, undergoing a change in combining with b@) and the free form of the pronoun (i.e.

(i) The use of the bound form of the pronoun in this sentence is confined to the colloquial language and, for that reason, should not have appeared here. Nevertheless, I thought it would be helpful to consider all possible constructions.

u)[i] occur, are grammatical. This fact shows that ke is not a relative pronoun but a conjunction; otherwise, when it occurred by itself in 11.(a), 12 (a) and 13(a), the resulting sentences would be grammatical and we would not have to use a pronoun in order to have a complete sentence. One might argue that sentences like 14 in which there is no pronoun are grammatical and that is why ke should be considered a relative pronoun.

(brother) (I) (that)(to) (Tabriz)(had gone)(came)
14 : bar@dare man ke be tabriz rafte-bud @mad
= My brother, who had gone to Tabriz, came.

Notice that in 14 , bar@dare man = "my brother" is the subject of both the matrix sentence and the embedded sentence. It follows that the verb of the embedded clause which copies the features of person and number of the subject (before the subject is omitted) helps us to understand to whom it refers. We said "it helps us" and do not wish to say "it illustrates" because the omission of identical NP from the surface structure is not always due to this factor. In other words, it is not always the case that when identical NP is the subject of an embedded sentence it can be omitted. In 15 the identical NP of the embedded sentence is not the subject of the sentence, and yet it could be omitted or it could be pronominalized.

(i) For division of Persian pronouns into bound and free forms see Table 2 on p.130.

(Parvin)(with)(key) (that) (to)(she)(gave-you)(door)

15: (a) parvin b@ kelidi ke be u d@di dar

(opened)

r@ b@z-kard = Parvin opened the door with the key which you gave her.

(Parvin) (with)(key) (that) (it) (to) (she)

(b) parvin b@ kelidi ke @n r@ be u

(gave-you)(door)(opened)

d@di dar r@ b@z-kard = Parvin opened the door with the key which you gave her.

As 15 shows, kelid = "key" is not the subject of the embedded sentence and yet it is omitted from 15(a). In 15(b), kelid = "key" which is the indirect object of the matrix sentence, and the direct object of the embedded sentence, is not omitted and it is pronominalized, and yet both sentences are grammatical. It follows that the fact whether the identical and coreferential NP in the embedded sentence is the subject or the object of the sentence does not help us towards making a general statement as to whether the noun should be omitted or preserved in the form of a pronoun.(i)

Another fact will help us to show that in fact one of the characteristics of a Persian pronoun is the possibility of its being omitted (and this has nothing to do with the occurrence of ke in a sentence). And this is the case in conjoined sentences. In Chapter 3, we have shown and illustrated in detail that when we have

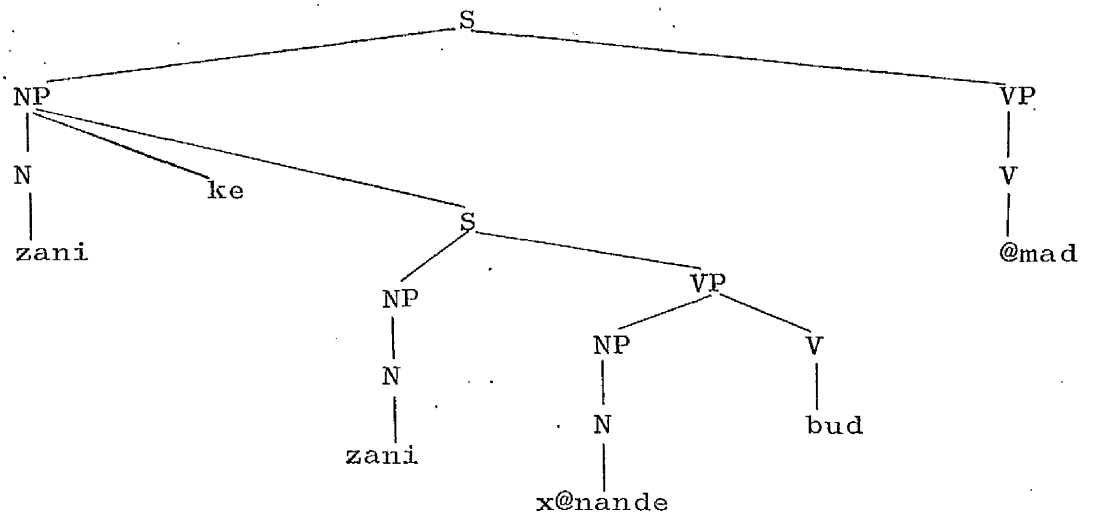
(i) We have discussed the pronominalization and omission of identical and coreferential NP from embedded and second conjoined sentences in detail in Chapter 3.

two conjoined sentences, sometimes the identical NP of the second conjoined sentence should be omitted, and that preserving it in the form of a pronoun either causes ambiguity or forms an ungrammatical sentence. This is the case whether the identical NP is the subject of the sentence or not (see P. 145 and p. 149). In these conjoined sentences, as one can see, there is no ke which we could regard as a relative pronoun and yet the process of omission of identical and coreferential NP which we regard as a characteristic of the Persian language takes place.

From what has been said above, we can conclude that ke is a conjunction and not a relative pronoun and that as we have illustrated, if it were a relative pronoun, in all sentences it could replace the identical noun and we would not need to use a pronoun as well(i).

Now we come back to the question of deriving a sentence such as (woman)(singer) (came) / zane x@nande @mad = "The woman singer came" whose deep structure is shown by P.M.1 (p.64). After applying T relative clause formation (restrictive), the tree diagram would have the shape:

(i) E. Bach, in his work Syntactic Theory, pp.257-258, puts forward three types of relative clauses occurring in English and follows them up by four types of relative clauses, occurring in various languages, mentioned by A.Schwartz in his article "General Aspects of Relative Clause Formation" appearing in Working Papers on Language Universals (Stanford University Language Universals Project), Vol.6, 1971, pp.139-171. Looking at these seven types enumerated by E.Bach, we can see that relative clauses in Persian fall into the



P.M.5.

As we can see, the identical NP of the embedded sentence is not omitted by T relative clause formation (restrictive). That is because the question of omission or pronominalization of identical and coreferential NP of the embedded sentence is not a simple one that can be captured by one rule, but is to be determined by T pronominalization, which is given on p.139 and the chart which is connected to it (p.141).

T pronominalization , as given on p.139 , is :

SD = X - NP - Y - NP - Z

1 - 2 - 3 - 4 - 5

⟹ oblig according to the rules of connected chart

SC = 1 - 2 - 3 - { Ø. / pronoun } - 5

T rule continued on the next page

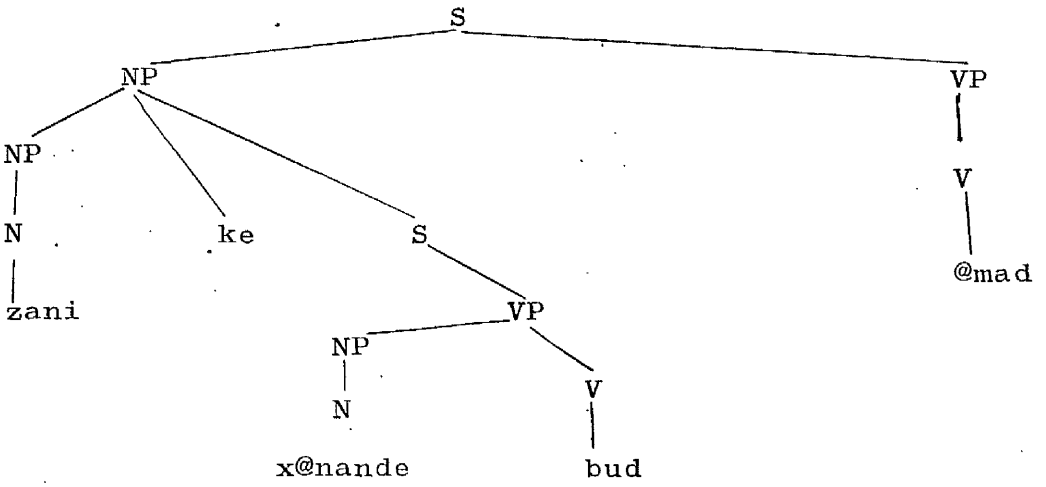
⟹ categories 2 and 4 (i.e. NP That..... Ø .... and NP That .....Pro .....)- only with"That" as a conjunction.

Condition: (a) 2 and 4 are identical and co-referential.

(b) 2 and 4 are dominated by different sentences.

In the case of P.M.5 as shown by the chart on P.141, the identical NP should be omitted from the surface structure and we come up with the actual sequence of the elements

(woman)(that) (singer) (was) (came)
zani ke x@nande bud @mad = "The woman who was a singer came", whose phrase marker is shown by P.M.6.



P.M.6.

In P.M. 6, the embedded S dominates only VP because its NP, which was identical and coreferential to the NP of the matrix sentence, is omitted. The order of T rules is crucial in the process of relative clause formation. First we have to apply T relative clause formation (p.66), and then T pronominalization ; for if we first apply T pronominalization, the identical NP of the embedded

sentence will be omitted or pronominalized and there would be no identical and coreferential NP to show us that we have to apply T relative clause formation(restrictive).

As we have shown before, P.M. 6 is the underlying structure for the sentence 7 ,p.63 : zane (woman) x@nande (singer) @mad (came) = "The woman singer came". We have to apply only one T rule to P.M.6 to come up with the string of elements in sentence 7 . We call this T noun-phrase formation because it enables us to derive a noun-phrase from the embedded relative clause. T noun-phrase formation No.1 :

$$SD = X - \left[\underset{NP}{\left[N+i - ke - \left[\underset{S}{\left\{ \begin{matrix} NP \\ adj\ P \\ \left[P - NP \right] \\ PP \quad PP \end{matrix} \right\} - V - AUX \right]} \right]} \right]_{NP} - Z$$

$$1 - 2+3 - 4 - \left\{ \begin{matrix} 5 \\ 5 \\ 5' - 5'' \end{matrix} \right\} - 6 - 7 - 8 \Longrightarrow \text{option}$$

$$SC = 1-2+e-\emptyset - \emptyset - \left\{ \begin{matrix} 5 \\ 5 \\ \emptyset \quad -5'' \end{matrix} \right\} - \emptyset - \emptyset - 8$$

Condition: 6 = copula

The condition imposed upon T noun-phrase formation No.1 shows that the rule can be applied if the embedded sentence is equational (i.e. V = copula .). It omits the verb and auxiliary and also i and ke which are restrictive relative clause marker and conjunction respectively. The rule also attaches e to the end of the noun.(i)

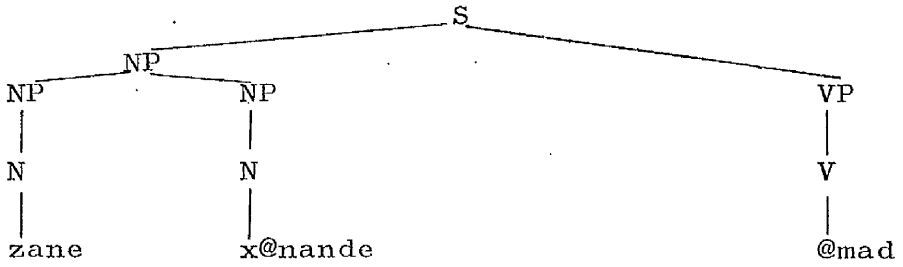
(i) The element which has to be attached to the NP which →

The element 5 shows three options vertically (i.e. NP, adj P and PP). The SC of T noun-phrase formation No. 1 shows that if we have NP or adj P in our underlying structure we should preserve them, and if we have PP, we have to omit the preposition and preserve the NP which follows it. The third option is for generation of sentences like (woman)(singer) (came) / zane x@nande @mad = "The wife of the singer came." whose deep structure is shown by P.M.2 (p. 65).

As a result of the application of T noun-phrase formation No.1 we come up with the string of elements equivalent to the surface structure of the sentence (woman) (singer) (came) / zane x@nande @mad = "The woman singer came", and the tree diagram associated with it would have the shape:

→

is dominated by S could be realized as e or ye. The distribution of these two elements is phonologically conditioned. e follows words whose final sounds are consonants and ye follows words whose final sounds are vowels. The phonological component of the grammar will select the right element to be attached to the end of the noun concerned. We are using e in our rules because usually when there are two adjacent vowels a glide occurs predictably between them.



P.M.7.

In Persian, e is called ez@fe which means an "additive" and the whole construction (i.e. (woman) zane (singer) x@nande = "singer woman" or (book) (good) ket@be xub = "good book" is called an ez@f e construction. We will adhere to this name for referring to this grammatical factor. We call the rule which we produce for noun-phrase formation T noun-phrase formation No. 1, because we have introduced (P.106) another T rule for the formation of the noun-phrase from equational sentences, and this is different from T noun-phrase formation No. 1. The two processes cannot be captured by one T rule because two different surface structures and two different deep structures are involved.

For generating the surface structure of the sentence (woman) (singer) (came) zane x@nande @mad = "The wife of the singer came" from its deep structure, which is shown by P.M.2 (P.65) and which is associated with the interpretation of the sentence as (woman)(that)(belong to) zani ke m@le (singer) (was) (came) x@nande bud @mad = "The woman who belonged to the singer came", we first apply T relative clause formation (p.66)

and T pronominalization to come up with the string of elements (woman) (that)(belong to)(singer)(was) (came)
zani ke m@le x@nande bud @mad
= "The woman who belonged to the singer came", and then we apply T noun-phrase formation No.1 to generate (woman) (singer) (came)
zane x@nande @mad. Again we should stress that it is only by drawing up the two deep structures that the two meanings which are associated with the sentence (woman)(singer) (came)
zane x@nande @mad can be shown.

There is one point that we have to clarify here. This is the justification of the element m@le = "property of" which we introduced in the deep structure of P.M.2 (p. 65). m@le means "property of" in Persian. Consider the following examples:

(book) (Parvin)
16:(a)ket@be parvin = Parvin's book.

(tree) (garden)
(b) deraxte b@q = the garden tree.

(wall) (house)
(c) div@re x@ne = the wall of the house.

(girl) (school)
(d) doxtare madrese = the schoolgirl.

In the above examples we see that in (a), the object ket@b="book" belongs to parvin(i), in (b), deraxt =

(i) One might argue that when we say (book) (Parvin)
ket@be parvin "Parvin's book" or ket@bi ke m@le parvin ast ="The book which belongs to Parvin", we might mean "The book which has been bought by Parvin" or else "The book which has been given to Parvin as a present". We consider this fact a purely semantic fact which is to be handled by the semantic component of the grammar.

"tree" belongs to b@q = "garden" , in (c), div@r = "wall" belongs to x@ne = "house" and in (d), doxtar = "girl" belongs to madrese = "school". In fact the native speakers of Persian interpret these phrases as:

(book) (that)(belong to) (Parvin)(is)
17: (a) ket@bi ke m@le parvin ast

= the book which belongs to Parvin.

(tree) (that)(belong to)(garden) (is)
(b) deraxti ke m@le b@q ast

= the tree which belongs to the garden.

(wall) (that) (belong to)(house) (is)
(c) div@ri ke m@le x@ne ast

= the wall which belongs to the house.

(girl) (that)(belong to) (school) (is)
(d) doxtari ke m@le madrese ast

= the girl who belongs to the school.

To be more precise, if the second noun is human, it possesses the first noun. And if it is non-human (i.e. animal, plant or inanimate) the first noun is part of the second noun. The third possibility occurs when the first noun is human (like doxtare madrese = "school-girl"). Here the first noun is associated with the second noun. The native speakers of Persian use the word m@le for expressing all three cases which we have mentioned above. One might envisage a situation in which we might ask a teacher:

(this) (girls) (who) (are)
18 (a): in doxtarh@ ke hastand = Who are these girls?

and the teacher replies:

	(belong to)	(school)	(we)	(are-they)	
18(b):	m@le	madreseye	m@	hastand	= They belong to our school.

Therefore, for showing the three semantic interpretations which are associated with the four NP constructions (example 16), we state the word m@le in the deep structure.

A question might arise here: Why do we set up a deep structure to explain the three semantic interpretations associated with 16(a), 16(b) and 16(c), while we do not do so to explain the different interpretations in the footnote on p. 79 ? The answer is that by introducing m@le in the deep structure of 16(a), 16(b) and 16(c), we have captured the semantic interpretation of those phrases. And in my view, a phrase (and in some cases a compound word) is the smallest construction whose semantic interpretation could and should be dealt with by syntax. But I regard the latter case (i.e. the case of the interpretation which we have given in the footnote on p. 79) as purely a semantic one, because it has to do with the different meanings of a simple word (i.e. m@le). In other words, we draw a line between syntax and semantics in such a way that when the question is about the interpretation of a simple word we regard it as purely semantic; and when the question is about the semantic interpretation which has to do with a combination of two words, or a word plus an affix (each one having its own categorical

status as verb,noun,adjective,etc.), we see ourselves in the feild of syntax.

b: NP in Appositional Sentences

We introduced one type of complex sentence (P.64) whose deep structure consisted of two sentences - one embedded in the other. We mean structures like:

(teacher) (good) (came)
19: mo?alleme xub @mad = The good teacher came.

This is derived from the sentence:

(teacher) (that) (good) (was) (came)
20: mo?allemi ke xub bud @mad = The teacher who was good came.

20 shows the kind of sentences which have restrictive relative clauses in them. The deep structure of this kind of sentence, as we showed (P .64),consists of two sentences, one embedded in the other. Now we are going to discuss the sentences whose deep structures consist of two compound sentences. They are sentences which have non-restrictive clauses in them (appositional clauses) and appositional sentences are derived from them. 21(a) and 22(a) show sentences with non-restrictive clauses, and 21(b) and 22(b) show their counterparts.

(book) (that)(element) (basic) (culture)
21: (a) ket@b, ke p@yeye asliye farhang

(was) (expensive-became)
bud , ger@n-&od = Books, which were the basic element of culture, became expensive.

(b) (book) (that)(element)(basic) (culture)
ket@bi ke p@yeye asliye farhang
(was) (expensive- became)
bud ger@n-&od = The book which was the basic element of culture became expensive.

22: (a) (Nezami) (that) (poet) (great) (was) (in)
nez@mi, ke &@?ere bozorgi bud, dar
(Ganje) (born - became)
ganje motevalled-&od = Nezami, who was a great poet, was born in Ganje.

(b) (Nezami) (that)(poet) (great) (was)(in)
nez@mi?i ke &@?ere bozorgi bud dar
(Ganje) (born - became)
ganje motevalled-&od = The Nezami who was a great poet was born in Ganje.

The difference between (a)'s and (b)'s is clear. (a)'s have an intonation pause after the NP of the matrix sentence (which we show by a comma). (b)'s have i attached to the end of the same NP. On the other hand, ket@b = "book" which is a common noun is used in its generic sense in 21(a). In 21(b), ket@b is used in its definite sense. This shows that the i which is attached to it is not an indefinite marker(i). Also in 22(b),

---

(i) We have discussed the existence of two different i's in Persian in detail under the title"The Three Senses of the Noun". This fact has been largely ignored by grammarians in the past.

the occurrence of i at the end of the proper noun shows that we have distinguished Nezami the poet from another Nezami who is not a poet. This is why we refer to this i as the marker for the restrictive relative clause.

When we consider the differences between appositional sentences (derived from non-restrictive clauses) and the sentences which are derived from restrictive clauses, we can conclude that they are derived from two different deep structures. Consider these examples:

(Ali) (brave)(came)

23: (a) aliye delir @mad = The brave Ali came.

(Ali) (brave) (famous)(came)

(b) ali, delire ma&hur, @mad = Ali, the famous brave person, came.

(Ferdousi) (poet) (came)

24: (a) ferdousiye &@?er @mad = Ferdousi the poet came.

(Ferdousi) (poet) (great) (came)

(b) ferdousi, &@?ere bozorg, @mad = Ferdousi, the great poet, came.

23(a) and 24(a) are examples of complex sentences which are derived from restrictive clauses and which have embedded sentences in their deep structures (p.64). 23(b) and 24(b) are examples of appositional sentences derived from non-restrictive clauses and, as we are going to show, have conjoined sentences in their deep structures. The differences between 23(a) and 23(b) and between

24(a) and 24(b) are clear in the surface structure. In the (a)-examples, there is e (i.e. the marker of ez@fe construction) between ali and delir and also between ferdousi and &@?er; whereas in (b)'s, there are no e's between them. Instead, there are intonation pauses, between ali and delir and also between ferdousi and &@?er, which we have shown by commas . The second difference between 23(a) and 23(b) is that in sentences like 23(a), where we have an ez@fe marker (i.e. e) between two nouns, the second NP in the surface structure (which is an NP dominated by VP of the embedded sentence in the deep structure) can consist of a single noun. There is no condition which we have to consider for forming them. First NP and second NP can consist of a single noun and each noun can be common or proper, whereas appositional sentences like 23(b) and 24(b), in which there is a pause between two noun-phrases, can only be formed under restricted conditions. There are two conditions which should be met in these sentences. The first is that one and only one of the two NP's should have a proper noun or a common noun in its generic sense as the main element of NP construction. Thus 25 is deviant:

(soldiers)(brave ones)(came)

25:* sarb@z@n, delir@n, @madand = Soldiers, brave ones, came.

The second condition is that the NP which does not include the proper noun, cannot consist of an unaccompanied noun. It should consist of N + N or N + adj or N + PP. Thus 26 is a deviant sentence:

(Ferdousi) (poet) (came)
26:* ferdousi &@?er @mad = Ferdousi, the poet, came.

(Ferdousi) (poet) (great) (came)
27: ferdousi, &@?ere bozorg, @mad = Ferdousi, the great poet, came.

(Ferdousi) (poet) (Tus) (came)
28: ferdousi, &@?ere tus, @mad = Ferdousi, the poet of Tus, came.

As the examples show, both conditions should be met in order for us to have a well formed sentence. There is no such condition for the sentences derived from the sentences which contain restrictive clauses. Therefore, the deep structures of appositional sentenses should differ from these.

We now show that an appositional sentence has two conjoined sentences in its deep structure. Consider the sentence 29:

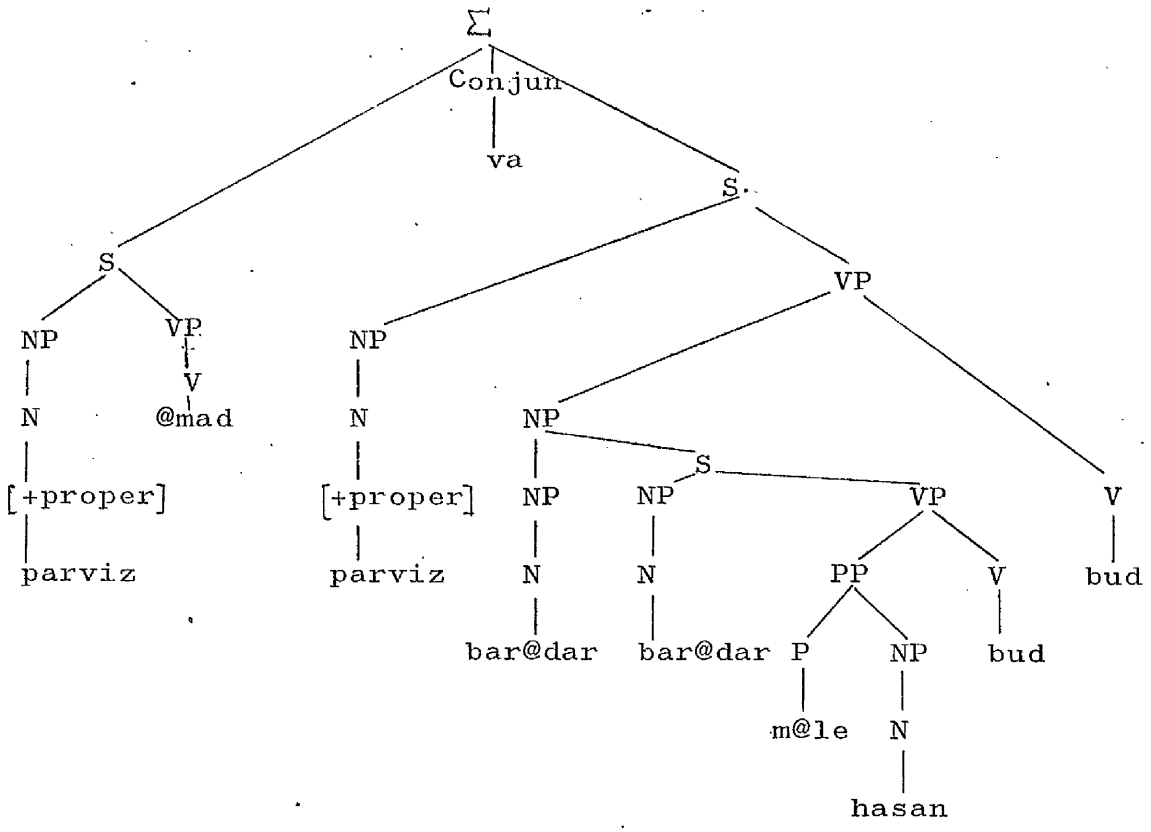
(Parviz)(brother) (Hasan) (came)
29: parviz, bar@dare hasan, @mad = Parviz , Hasan's brother, came.

Here we are confronted with two NP's. The first one is parviz and the second one is bar@dare hasan="Hasan's

brother". The deep structure of 29 consists of two compound sentences, and each of the NP's (i.e. parviz and bar@dare hasan) belongs to one of these sentences. The two conjoined sentences are parviz @mad = "Parviz came" and parviz bar@dare hasan ast = "Parviz is Hasan's brother". We argue that bar@dare hasan = "Hasan's brother" is the NP which is dominated by the VP of the second conjoined sentence and that it is not dominated by the embedded sentence because we have already shown that the NP which is dominated by VP in the embedded sentence is linked to the NP which is dominated by S of the matrix sentence by the ez@fe marker in the surface structure; and we cannot have 29 in the form of 30.

(Parviz) (brother) (Hasan) (came)
30:* parvize bar@dare hasan @mad

The pause between two NP's is another natural clue which shows that we have ended one phrase and are starting another one and that the two phrases belong to different sentences. Here is the phrase marker associated with the deep structure of 29:



P.M.8.

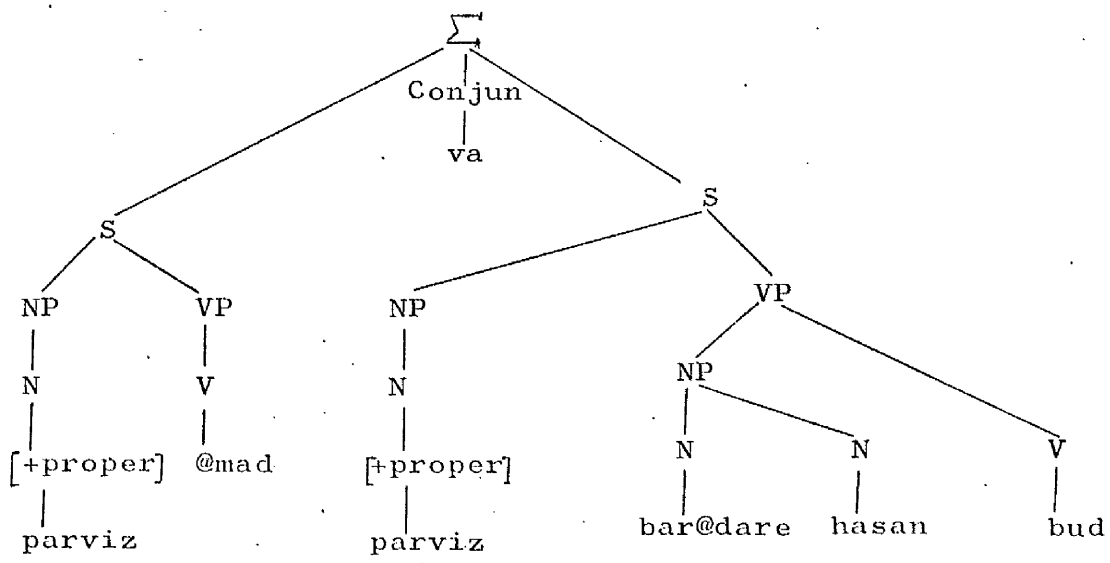
First we apply T relative clause formation (p.66) and T noun-phrase formation (p.76) to convert the string

(brother)(brother)(belong to) (Hasan) (was)
bar@dar bar@dar m@le hasan bud

to

(brother) (Hasan)
bar@dare hasan

="Hasan's brother". After their application, P.M.8. would have the shape:



P.M.9.

We have mentioned before that the pause between two NP's shows that we end one sentence and start another one. To show this process, we suggest a T rule and this introduces the second conjoined sentence immediately after the noun-phrase. We call this rule T sentence insertion:

T sentence insertion:

SD = X - NP - VP - Conjun - NP_2 - VP_2 - X

1 - 2 - 3 - 4 - 5 - 6 - 7

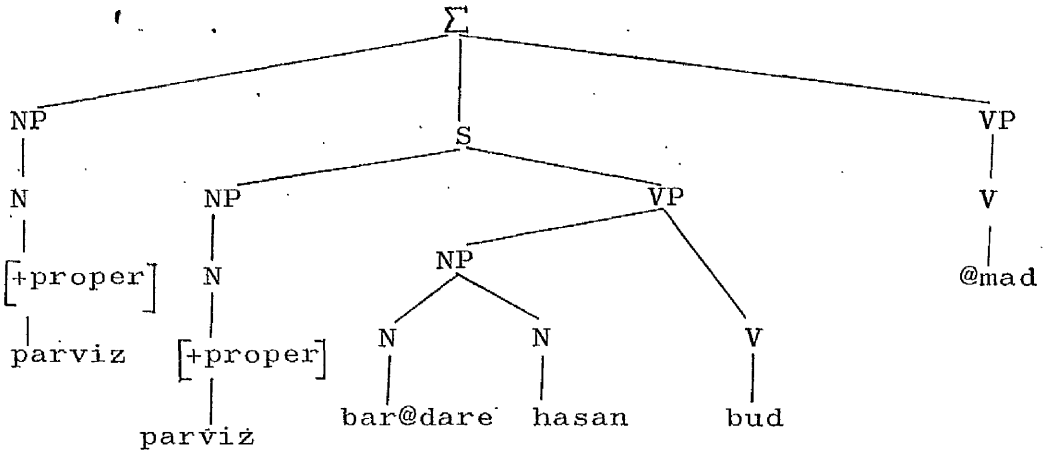
$\Longrightarrow$ optional

SC = 1 - 2 - 5 - Ø - 6 - 7 - 3

Condition: 2 identical and coreferential to 5.

4 = va

The rule shows that if we have two sentences joined by va = "and" and if their NP's which are immediately dominated by S are identical and coreferential, we can transfer the second conjoined sentence to a position following the noun-phrase of the first conjoined sentence. If we do that, we have to omit va. The omission of va is obligatory, otherwise we cannot have the natural sentence. After applying T sentence insertion the tree diagram 9 will have the shape:



P.M.10.

In order to have the natural sentence (Parviż) (that) parviz ke (brother) (hasan) (was) (came) bar@dare hasan bud @mad = "Parviz who was Hasan's brother came", we have to apply T relative clause formation (non-restrictive). This is an obligatory T rule and we have discussed (P.87) why and how it differs from T relative clause formation (restrictive).

T relative clause formation (non-restrictive):

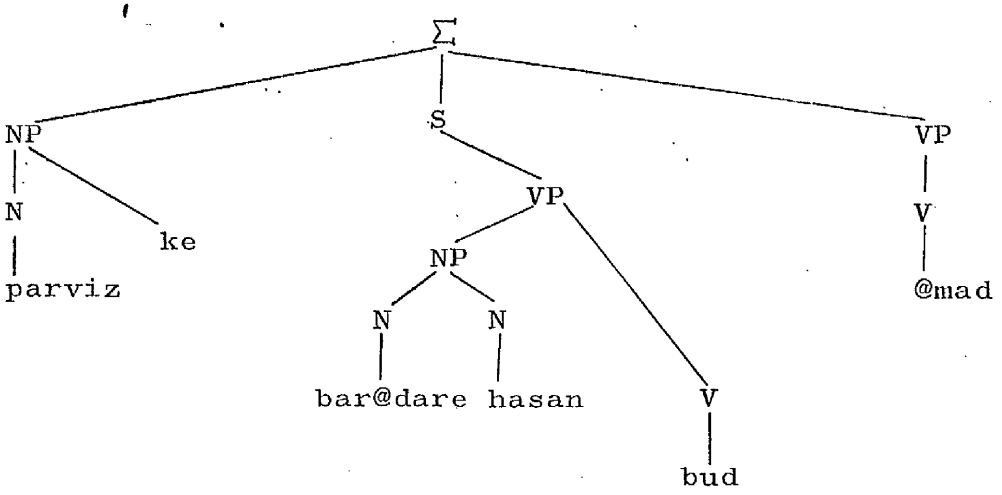
$$SD = X - N - \begin{bmatrix} \pm proper \\ \pm generic \end{bmatrix} - NP - NP - V - X$$

$$1 - 2 - 3 - 4 - 5 - 6 \Longrightarrow \text{oblig}$$

$$SC = 1 - 2 + ke - \emptyset - 4 - 5 - 6$$

$$\text{Condition } 2 = \begin{cases} [+proper] \\ [+generic] \end{cases}$$

The application of T relative clause formation (non-restrictive) is obligatory after the application of T sentence insertion. After its application the tree diagram associated with the resulting sentence would be:



P.M.11.

We do not have to impose condition 2 = 3 upon T relative clause formation (non-restrictive) because it has to be applied after T sentence insertion, and we have shown that T sentence insertion cannot be applied unless the condition 2 = 5 is met, and 5 in P.M.9 (i.e. NP of the second conjoined sentence) is 3 in P.M.10. The condition imposed upon T relative clause formation (non-restrictive), i.e. that two identical and coreferential nouns (i.e. main elements of NP's) should have the feature [+ proper] or [+generic] associated with them, prevents the grammar from generating such deviant sentences as 31(a) :

(book) (that)(last year)(bought-I) (cheap - became)

31(a):*ket@b, ke p@rs@l xaridam, arz@n-&od

Notice that the same sentence with a restrictive clause is grammatical. Thus 31(b) is not deviant:

(book) (that)(last year)(bought-I) (cheap-became)

31(b): ket@bi ke p@rs@l xaridam arz@n-&od

= The book which I bought last year became cheap.

However, the order of elements in P.M.11 is the actual order of elements in the sentence (Parviz) parviz (that)(brother) (Hasan) (was) (came) ke bar@dare hasan bud @mad = "Parviz, who was Hasan's brother, came".

In order to derive the appositional sentence from P.M. 11 , we apply T-apposition which is an optional rule. It deletes ke and the verb of the second conjoined sentence:

T-apposition:

SD = X - N - ke - NP - V - Y

1 - 2 - 3 - 4 - 5 - 6 ⟹ option

SC = 1 - 2 - Ø - 4 - Ø - 6

Condition: 5 = copula.

The condition imposed upon T apposition shows that we cannot have an appositional sentence unless the verb of the non-restrictive clause is the copula. It follows that the sentences which contain non-restrictive clauses, and which have verbs other than the copula in these clauses, cannot be the base of appositional sentences. The deleted copula in an appositional sentence is understood. With other verbs, this is impossible. The condition which is imposed upon T relative clause formation(non-restrictive)(i.e. that the main element of NP should be a proper noun or a common noun in its generic sense) is effective here and blocks the generation of such sentences as 32:

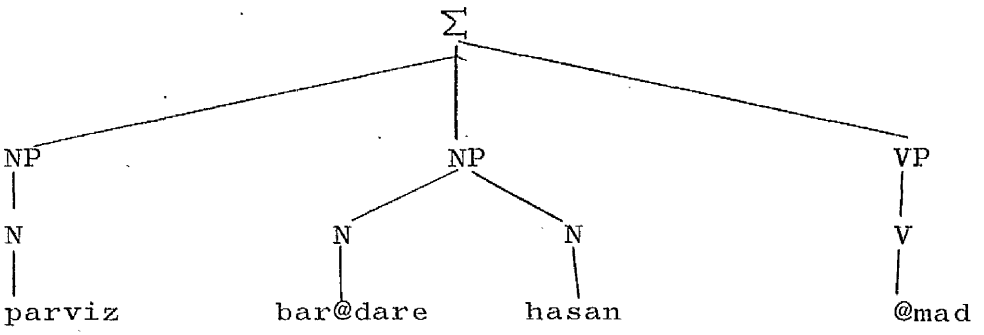
(soldier) (brother) (Hasan) (came)
32:* sarb@z bar@dare hasan @mad = The soldier, Hasan's brother, came.

But 33, in which we use a proper noun (i.e. ali) instead of a common noun (i.e. sarb@z ="soldier"), is grammatical.(i)

(Ali)(brother) (Hasan)(came)
33: ali, bar@dare hasan, @mad = Ali, Hasan's brother, came.

As a result of applying T apposition, we come up with the string of elements whose associated phrase marker is shown by P.M.12.

(i) Some of my informants believe that an appositional sentence with a common noun is unacceptable even if the main element of NP is a generic noun. Thus they believe that the sentence (book) (source of) (culture)(expensive-became) ket@b, sarce&meye farhang, ger@n-&od ="Books, the source of culture, became expensive" is deviant. They insist that a modifier like the word ya?ni = "i.e." should come before the second NP and form a sentence like (book) (this) (source of)(culture) (expensive-became) ket@b, in sarce&meye farhang, ger@n-&od or (book) (which means)(source of) (culture)(expensive-became) ket@b ya?ni sarce&meye farhang ger@n-&od. As this idea is not accepted by all informants, we do not rule out such sentences as deviant. We only spell out this point here to show that appositional sentences with common nouns in their generic sense are less usual.



P.M.12.

The point which we have to clarify here is the difference between T relative clause formation (restrictive) and T relative clause formation (non-restrictive). We have already shown (P.86) that in appositional sentences the NP which has not a proper noun as its main element should not be an unaccompanied noun. Thus the (b)-sentences in the following example are deviant:

(Parviz)(carpenter)(district)(came)

34:(a) parviz, najj@re mahalle, @mad = Parviz, the carpenter of the district, came.

(Parviz) (carpenter)(came)

(b)*parviz, najj@r, @mad = Parviz, the carpenter, came.

(Ferdousi)(poet) (Shahname)(famous) (is)

35:(a) ferdousi, &@?ere &@hn@me, ma&hur ast = Ferdousi, the poet of Shahname, is well known.

(Ferdousi)(poet) (famous) (is)

(b)*ferdousi, &@?er, ma&hur ast= Ferdousi, the poet, is well known.

(Alexander)(hero) (Greece)(victorious)(became)

36:(a) eskandar, qahram@ne yun@n, f@teh &od = Alexander, the hero of Greece, became victorious.

(Alexander)(hero) (victorious)(became)
(b)*eskandar, qahran@n, f@teh &od
= Alexander, the hero, became victorious.

As the examples show, NP_2 in the (b)-sentences (i.e. (carpenter) (poet) (hero) najj@r, &@?er, qahram@n) cannot stand in apposition with NP_1 i.e. (Parviz) (Ferdousi)(Alexander) parviz, ferdousi, eskandar). In order for us to have a well formed sentence, NP_2 has to form an NP construction with NP_1 (i.e. (Parviz) parvize (carpenter)(Ferdousi) (poet) najj@r, ferdousiye &@?er and (Alexander) (hero) eskandare qahram@n respectively). In other words, they have to be subordinative clauses in their deep structures. 37, 38 and 39 show the grammatical forms of 34(b), 35(b) and 36(b) respectively:

(Parviz) (carpenter)(came)
37: parvize najj@r @mad = The carpenter Parviz came.

(Ferdousi) (poet) (famous)(is)
38: ferdousiye &@?er ma&hur ast = The poet Ferdousi is well known.

(Alexander) (hero) (victorious)(became)
39: eskandare qahram@n f@teh &od =The hero Alexander became victorious.

34(a), 35(a) and 36(a) show the kind of sentences derived from the sentences which have non-restrictive clauses in them i.e. 40, 41 and 42 respectively:

(Parviz) (that)(carpenter)(district) (was) (came)
40: párviz, ke najj@re mahalle bud, @mad
= Parviz, who was the carpenter of the district, came.

(Ferdousi)(that)(poet) (Shahname)(is) (famous)(is)
41: ferdousi, ke &@?ere &@hn@me ast, ma&hur ast
= Ferdousi, who is the poet of Shahname, is well known.

(Alexander)(that)(hero) (Greece)(was)(victorious)(became)
42: eskandar, ke qahram@ne yun@n bud, f@teh &od
= Alexander, who was the hero of Greece, became victorious.

40, 41 and 42 are formed after the application of T relative clause formation (non-restrictive) to the underlying structure consisting of two compound sentences. On the other hand, 37, 38 and 39 illustrate the kind of sentences which are derived from the sentences having restrictive relative clauses in them i.e. 43, 44, 45.

(Parviz) (that)(carpenter)(was)(came)
43: parviz i ke najj@r bud @mad = The Parviz who was a carpenter came.

(Ferdousi) (that) (poet) (is)(famous) (is)
44: ferdousi?i ke &@?er ast ma&hur ast
= The Ferdousi who is a poet is well known.

(Alexander) (that)(hero) (was) (victorious)(became)
45: eskandari ke qahram@n bud f@teh &od
= The Alexander who was a hero becmae victorious.

And 43, 44, 45, in turn, are formed after the application of T relative clause formation (restrictive) to the underlying structures consisting of two sentences, one embedded in the other. Thus we conclude that although

40, 41, 42 and 43, 44, 45 look almost the same from the structural point of view, we cannot derive the same set of sentences from them as they differ in their deep structures. The difference between T relative clause formation (non-restrictive) and T relative clause formation (restrictive) is based on this difference. The latter produces the kind of complex sentences like 43, 44, 45 after which the optional T rule we can apply would be T noun-phrase formation No. 1 (generating sentences like 37, 38, 39) and the former generates the kind of sentence like 40, 41 and 42, after which we can apply T apposition (generating sentences like 34(a), 35(a) and 36(a)). The condition under which the T relative clause formation(non-restrictive)should be applid is more restricted for the reasons we gave on pp.84-85.

In short, there are two different sets of sentences which are identical so far as the order of their elements is concerned, but which are not identical in their deep structures. We conclude this because different conditions have to be met for generating them (p.86) and also because they cannot stand as the underlying structures for sentences which are alike (the difference between 34(a), 35(a), 36(a) and 34(b), 35(b), 36(b) shows this point). Here again, we can see that the real grammatical relation between the elements of the sentence can be shown in its deep structure though these relations cannot be seen by the order of its elements in the surface structure.

By showing the deep structures of appositional sentences such as 34(a), 35(a) and 36(a), we can conclude that apposition is a form of co-ordination. We have shown how the deep structure of 29 (p.88) consists of two compound sentences. The NP's of two sentences were identical and coreferential and the second conjoined sentence was equational, so we could omit the identical NP and copula from the second conjoined sentence. We do not need va = "and" as we do in other forms of co-ordination, becuase the second conjoined sentence is split and placed after the NP of the first sentence, which is dominated by S. In this way the two sentences merge and form one sentence in the surface structure. The only element of the second conjoined sentence which is preserved in the surface is the NP which is dominated by VP.

---

c: NP in Complex Sentences formed by the Verbs budan or &odan

---

There is a difference between complex sentences formed by the verbs budan or &odan on one hand and those formed by other verbs on the other hand. And that is why we discuss the distribution of NP within this kind of sentence separately from other sentences. We have mentioned in Chapter One that the deep structure of a phrase like (girl) doxtare (beautiful) zib@ = "beautiful girl"

would be (girl) (that)(beautiful)(is) = "the girl
doxtari ke zib@ ast
who is beautiful", and the deep structure of the phrase
(teacher)(good) = "good teacher" would be (teacher)
mo?alleme xub mo?allemi
(that)(good) (is) = "the teacher who is good". We call the
ke xub ast
i, which occurs before the restrictive relative clause, "restrictive relative clause marker" to be distinct from the i which is the marker for indefiniteness. We shall discuss the difference between these two i's when we deal with the three senses of the noun. The only thing that we want to point out here is that both i's are regarded as markers for indefiniteness by Persian grammarians who are native speakers of Persian. We have shown (p.255) and clarified that this is not so and that they differ in function and, therefore, they are to be regarded as different elements.

Sentences with budan and &odan differ from other sentences in that the i is omitted in the latter when we want to form a noun-phrase from them (p.76). But in the complex sentences with the verbs budan and &odan, it remains if embedded S is embedded in NP > VP, and it gives the feature of indefiniteness to the resulting NP which is predicative. Consider the following sentences:

(Parviz)(teacher) (that) (good)(was)
46: (a) parviz mo?allemi r@ ke xub bud
(saw)
did = Parviz saw the teacher who was good.

(Parviz)(teacher) (good) (saw)
(b) parviz mo?alleme xub r@ did = Parviz
saw the good teacher.

(Parviz) (a teacher) (was) (that)(good)(was)

47: (a) parviz mo?allemi bud ke xub bud

= Parviz was a teacher who was good.

(Parviz)(a teacher)(good)(was)

(b) parviz mo?allemi xub bud = Parviz was a good teacher.

In both 46(a) and 47(a), the NP wich is dominated by VP dominates the restrictive clause. 46(b) is the counterpart of 46(a) in which the marker of the restrictive clause (i.e. i) is omitted. As we have shown, this process takes place when NP construction consists of NP plus embedded S. In both 46(a) and 46(b), the noun mo?allem = "teacher" is definite. On the other hand, 47(b) is the counterpart of 47(a) but in the process of noun-phrase formation from 47(a), the marker of restrictive clause (i.e. i) is preserved, and because there is no restrictive clause after it, it gives the feature of indefiniteness to the predicative NP. I am arguing here that i in 47(a) is the same element as i in 47(b) in that if we omit the adjective xub = "good" and have $\frac{\text{(Parviz)(a teacher)(was)}}{\text{parviz mo?allemi bud}}$ = "Parviz was a teacher" the sentence would not be complete and the hearer would expect more information. We have to complete the sentence either by adding to it a relative clause and say $\frac{\text{(Parviz)(a teacher) (was)(that)(good)(was)}}{\text{parviz mo?allemi bud ke xub bud}}$ ="Parviz was a teacher who was good", or by adding an adjective after mo?allemi and have $\frac{\text{(Parviz)}}{\text{parviz}}$

(a teacher) (good) (was)
mo?allemi xub bud = "Parviz was a good teacher".
And this adjective (i.e. xub = "good") has the same effect as that of a relative clause which gives more information about parviz. The occurrence of i in
(Parviz) (a teacher) (was)
parviz mo?allemi bud = "Parviz was a teacher" is the reason why the sentence is not complete and the hearer expects more information. For, as we have already said, i is the marker of the restrictive relative clause and unless the same clause or another grammatical element (e.g. adj.) which semantically fulfils the same purpose occurs in the sentence, the sentence is incomplete.

One might claim here that we do not have to preserve restrictive clause i in noun-phrase construction for forming such sentences as 47(b) because we have sentences like 48:

(Parviz) (teacher) (good)(was)
48: parviz mo?alleme xub bud = It was Parviz who was the good teacher.

The fact is that 48 should be read with a different intonation.

The main significance of the intonation with which 48 should be read is that we give emphasis to parviz. This is the clue from which we can learn that the deep structures of 48 and 47(b) are different, although the surface structure of 48 is the same as

that of 47(b), and although they are different only in the omission of i in 48 while i is preserved in 47(b). The fact is that in 47(b), parviz is dominated by S and mo?allem = "teacher" is dominated by VP, whereas in 48 (teacher)(good) mo?alleme xub = "good teacher" is dominated by S and parviz is dominated by VP. In fact, for the sake of emphasis, we have changed the place of parviz in the surface structure and put it before mo?allem = "teacher". For the justification of our claim, we replace parviz by (teacher) (good) mo?alleme xub = "good teacher" and, as a result of that, we can have the sentence 49 which is the same as 48 but without emphasis.

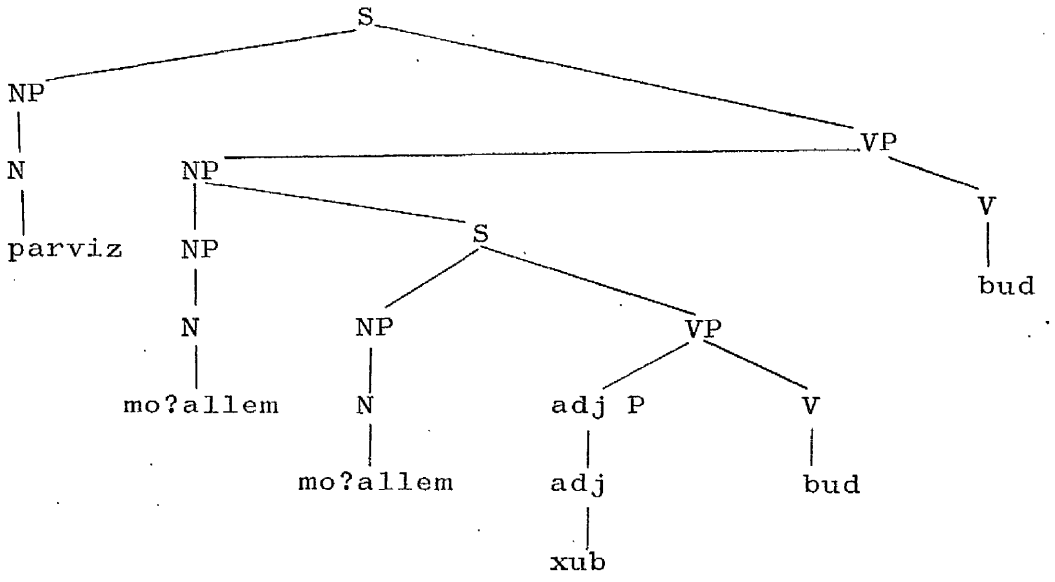
(teacher) (good) (Parviz) (was)
49: mo?alleme xub parviz bud = The good teacher was Parviz.

However, with 47(b), we cannot do the same thing and yet have a grammatical sentence. By permuting the elements (a teacher)(good) mo?allemi xub = "a good teacher" and parviz in 47(b), we come up with 50 which is a deviant sentence.

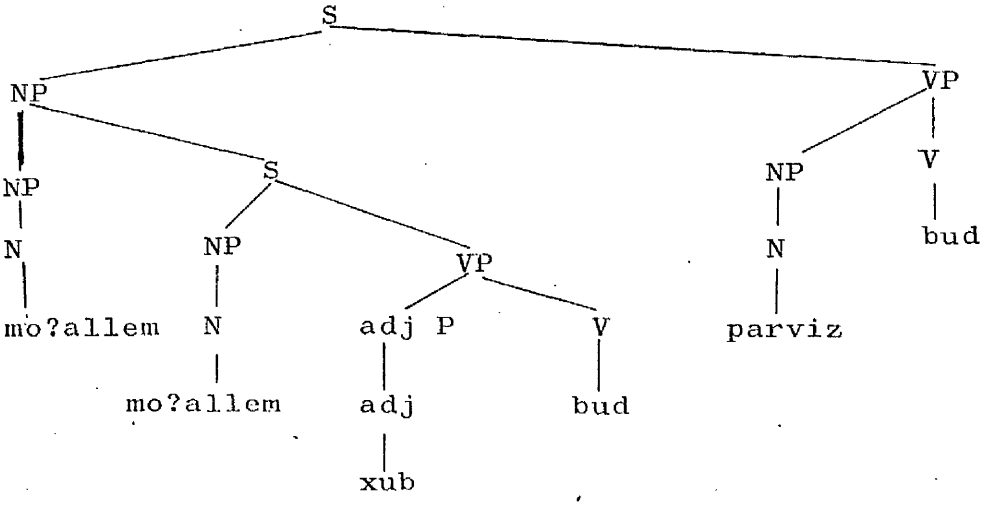
(a teacher)(good)(Parviz) (was)
50:* mo?allemi xub parviz bud

This shows that the deep structures of the two sentences are different. And it is only by drawing up their deep structures that we can illustrate syntactic relations between elements of these kinds of sentences -

those relations which cannot be shown by the order of the elements in the surface structure. This difference of relation between the elements of two sentences leads us to reading them with different intonations. P.M.13 and P.M.14 show the deep structures of 47(b) and 48 respectively:



P.M.13.



P.M.14.

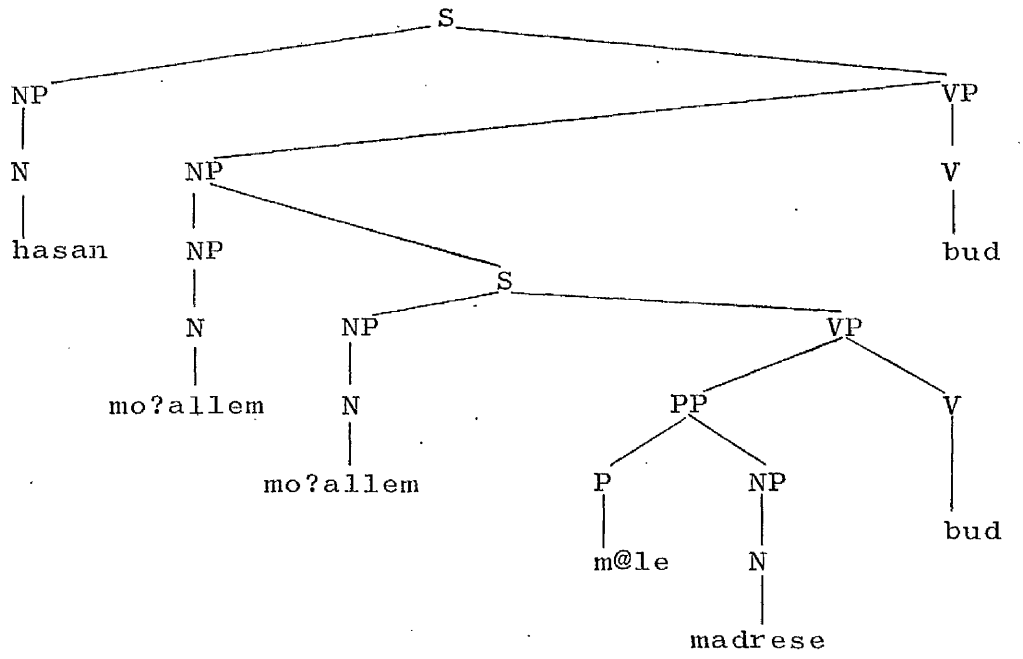
Here, a point arises which needs clarification. In the complex sentences formed by the verb budan or &odan, when we want to form an NP construction from a noun_phrase which has an embedded sentence in it, the marker of the restrictive relative clause i.e. i is not preserved if the VP of the relative clause consists of a prepositional phrase plus V. Consider the following examples:

(Hasan)(a teacher) (was)(that)(belong to)
51: (a) hasan mo?allemi bud ke m@le
(school)(was)
madrese bud = Hasan was a teacher who belonged to school.

(Hasan)(teacher)(school)(was)
(b) hasan mo?alleme madrese bud = Hasan was a school teacher.

(Hasan)(a teacher)(school) (was)
(c)*hasan mo?allemi madrese bud

In 51(b), the marker of the restrictive relative clause (i.e. i) is omitted and the sentence is grammatical whereas 51(c), in which the restrictive relative clause marker is preserved, is ungrammatical. Here is the deep structure of 51(a) and 51(b):



P.M.15.

From what has been said, we learn that for generating such sentences as 47(b) from 47(a) (p.100) we need a T rule for noun_phrase formation other than the one we introduced on page 76. This rule which we call T noun_phrase formation No. 2 shows that for generating such sentences as 47(b) from 47(a), we have to preserve the marker of restrictive clause (i.e. i) and we must not omit it. The condition which is imposed upon T noun_phrase formation No. 2 prevents the grammar from generating such sentences as 51(c).

T noun_phrase formation No.2:

$$SD = X - \underset{NP}{[} NP + \underline{i} - \underline{ke} - \underset{S}{[} \begin{Bmatrix} NP \\ adj \\ PP \end{Bmatrix} - V - AUX \underset{S}{]} \underset{NP}{]} - \underset{VP}{[} Y - V \underset{VP}{]} - Z$$

$$1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10$$

$$\Longrightarrow \text{optional}$$

$$SC = 1 - 2 - \begin{Bmatrix} +3 \\ +\underline{e} \end{Bmatrix} - \emptyset - 5 - \begin{Bmatrix} -\emptyset \\ +3 \end{Bmatrix} - \emptyset - \emptyset - 8 - 9 - 10$$

Condition: (a) 6 and 9 = copula

(b) 5 = - PP

Condition (a) which is imposed upon the rule is that T noun_phrase formation No.2 should be applied to equational sentences. Condition (b), as we have mentioned before, prevents the grammar from generating such sentences as 51(c). T noun_phrase formation No.2 shows that the structural change suggests two possibilities. The sentence resulting from the first possibility (i.e. when i is attached to NP) shows the structure of such sentences as 52:

(Parviz)(a teacher) (was) (wise)

52: parviz mo?allemi bud d@n@ = Parviz was a wise teacher.

However, the sentence resulting from the second possibility (i.e. when i is attached to NP) shows the structure of sentences such as 53:

(Parviz) (teacher) (wise_a) (was)

53: parviz mo?alleme d@n@i bud = Parviz was a wise teacher.

As 52 and 53 show, the order of elements is not the same in them. Apart from the status of i within the two sentences, there is ez@fe marker (i.e. e) between two elements of NP construction (i.e. mo?allem = "teacher" and d@n@ = "wise") in 53 and this is not so in 52. Also the verb occurs at the end of the sentence in 53, whereas in 52 this is not so. Here again the order of elements in the surface structure of the two sentences does not show that the same relation holds between their elements and it is only by drawing up their deep structures that we can show the fact that the relations between their elements are the same.

d: Complements

In this section, we are going to discuss clauses which are dominated by NP. Unlike restrictive relative clauses, they need not have an NP which is identical and coreferential to that of the matrix sentence. So, the NP of the embedded sentence which is not identical and coreferential to the NP of the matrix sentence is not omitted but preserved in the surface structure.

We will discuss these clauses under two headings: (1) Pre-verbal complement and (2) post-subjectival

complement .. For the naming of these two kinds of complements,we refer to their status in the deep structure. We discuss them separately because they differ in their deep structures and different T rules are involved in their generation.

Pre-Verbal Complement

By a pre-verbal complement, we mean a clause which is dominated by NP>VP provided that the NP consists of a sentence and only of a sentence and that it does not dominate any other node. Consider the following sentences:

(Parvin) (to) (Ali) (said) (that)(rain)
54: (a) parvin be ali goft ke b@r@n
(comes)
mi?@yad = Parvin said to Ali that it was raining.

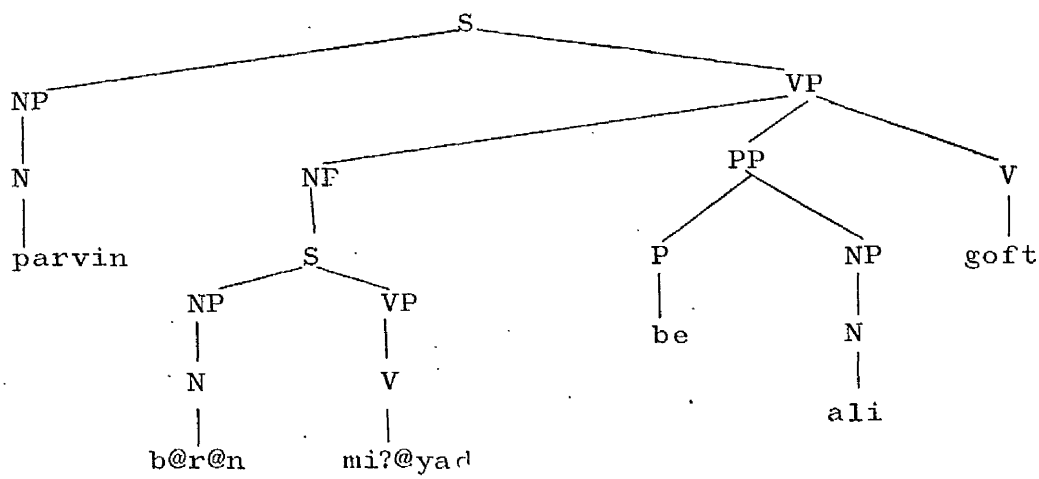
(Parvin)(event) (to) (Ali)(said)
(b) parvin m@jer@ r@ be ali goft = Parvin told Ali about the event.

(Parvin)(to)(Ali) (said) (that)(weather)(good)
55: (a) parvin be ali goft ke hav@ xub
(is)
ast = Parvin told Ali that the weather was good.

(Parvin)(to)(Ali) (story) (said)
(b) parvin be ali d@st@n r@ goft = Parvin told Ali the story.

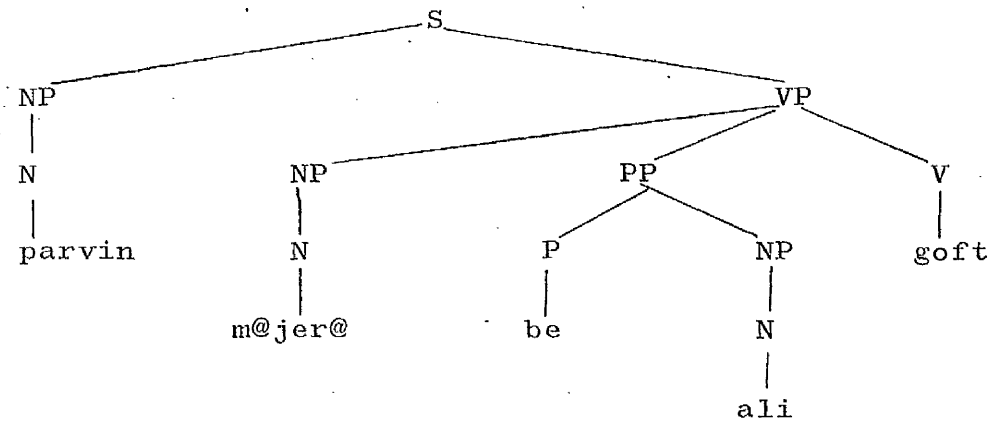
		(Parvin)	(had learned)	(that)	(book)
56:	(a)	parvin	y@d-gerefte-bud	ke	ket@b
		(reads)			
		bex@nad = Parvin had learned to read books.			
		(Parvin)	(lesson)	(had learned)	
	(b)	parvin	dars	r@	y@d-gerefte-bud
		= Parvin had learned the lesson			

In all (b)-sentences along, NP>VP in the deep and surface structures consists of a single noun (i.e. m@jer@ = "event", d@st@n = "story" and ket@b = "book"). In the (a)-sentences, however, the same positions are filled by a clause. First we show the deep structures of 54(a) and 54(b) respectively and then we show what rules are involved in their generation. Here is the phrase marker associated with the deep structure of 54(a):



P.M.16.

And here is the phrase marker associated with the deep structure of 54(b):



P.M.17.

As P.M.16 shows, the NP which dominates S is the one which is dominated by VP. And as we can see in P.M.16, the clause (rain)(comes) b@r@n mi?@yad = "it is raining" occupies the same place as m@jer@ = "event" in P.M.17 (i.e. both are dominated by NP>VP) although we see that in the surface structure they occupy different places. The examples suggest that their places in the deep structure are the same, and justify the need for drawing up the deep structures of the two sentences (i.e. 54(a) and 54(b)). Suppose one says (Parvin)(to) parvin be (Ali)(said) ali goft = "Parvin told Ali" and that the hearer interrupts the speaker and asks: (Parvin)(what)(said) parvin ce goft = "What did Parvin say?". The speaker can reply (event) m@jer@ r@ (rain) (comes) b@r@n mi?@yad = "it is raining". As we can see, in the course of speech the clause (rain)(comes) b@r@n mi?@yad = "it is raining" stands in the same place as m@jer@ = "event", whereas in the surface structures of the two sentences,

we cannot show that the relation of m@jer@ = "event" to the other elements of the sentence 54(b) is the same as the relation of the clause b@r@n mi?@yad = "it is raining" to the other elements of the sentence 54(a).

Sentences 54(a), 55(a) and 56(a) show the kind of complement whose NP is not identical and coreferential to the NP of the matrix sentence. 57 shows the kind of complement whose NP is identical and coreferential to the NP of the matrix sentence.

(Parvin)(to) (Ali) (said)(that)(to)(house)(he)
57: parvin be ali goft ke be x@neye u
(goes)
miravad = Parvin told Ali that she was going to his house.

For generating 54(a) from P.M.16, we have to apply a transformational rule which is obligatory and we call it T pre-verbal complement:

T pre-verbal complement:

SD = X - NP - NP - Y
1 - 2 - 3 - 4

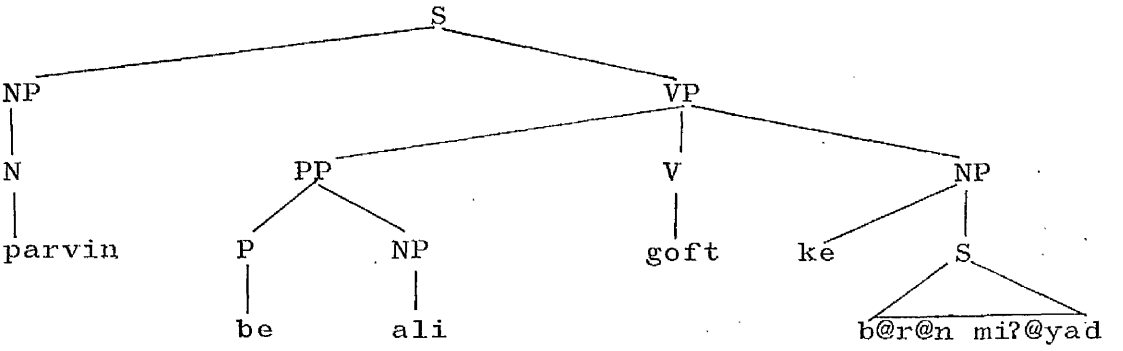
$\Longrightarrow$ oblig.

SC = 1 - 2 - 4-ke+3

Condition: 3 dominates S and only S.

The rule shows that when NP$\geq$VP dominates S and

nothing else we have to shift it to the end of the sentence.(i) ke is the only complementizer that can occur here. After applying T pre-verbal complement, P.M.16. would have the shape:



P.M.18.

We suggest that the pre-verbal complement should be stated in the deep structure in the form of NP⟶S and not NP⟶D-N-S or NP⟶N - S because the surface structure of this kind of complement shows that it only occupies the place of NP. The example which we gave on p.110 would justify our claim; and here is another example to clarify the point. In the course of speech somebody says:

(Parvin)(had learned)

58: parvin y@d-gerefte-bud = Parvin had learned.

(i) This rule in transformational literature is called extraposition. We have called it "pre-verbal complement" because in addition to extraposition it introduces the complementizer into the sentence and, as a result of that, we have a sentence formed from a complement.

And his sentence is interrupted by somebody else who asks:

(what) (had learned -she)
59: ce ciz r@ y@d -gerefte-bud = What had she learned?

The first speaker might say:

(way)(house)
60: r@he x@ne r@ = the way to the house;

or

(that)(book) (reads)
61: ke ket@b bex@nad = to read books.

We can conclude that 60 and 61 have the same relation to 58 so far as syntactic considerations are concerned, i.e. both are NP$\succ$VP in 62 and 63.

(Parvin) (had learned) (that)(book) (reads)
62: parvin y@d-gerefte-bud ke ket@b bex@nad
= Parvin had learned to read books.

(Parvin)(way) (house) (had learned)
63: parvin r@he x@ne r@ y@d-gerefte-bud
= Parvin had learned the way to the house.

Only in the surface structure, the clause (that) ke (book)(reads) ket@b bex@nad ="that she reads books" is extraposed and occurs at the end of the sentence. We need not add anything to 61 to have a complete answer to 59 . This trivial evidence in the surface structure suggests that we should introduce pre-verbal complement by the rule NP$\succ$S. Moreover, consideration of economy leads us to doing so, because by this analysis we have

to add only one rule to our phrase structure(base) rules (i.e. NP→S) whereas if we state pre-verbal complement in the deep structure as NP→D - N - S or NP→N-S, apart from covering up one of the facts of Persian grammar, we unnecessarily need to have a dummy element in our deep structure, and then one more transformational rule for omitting it.

. Post-Subjectival Complement

Another type of complement is the post-subjectival complement and, as the name suggests, it occurs after the subject of the sentence. Apart from its place within the elements of a sentence, it is different from pre-verbal complement in that in its deep structure it is embedded in the NP which is dominated by S. NP>S itself consists of D + N and this determiner is preserved in the surface structure. Consider the following sentences:

(this-that)(Parvin) (to) (journey) (goes)

64: (a) inke parvin be mos@ferat beravad

(bad)(is)

bad ast = That Parvin should go on a journey is bad.

(this)(bad) (is) (that)(Parvin) (to) (journey)

(b) in bad ast ke parvin be mos@ferat

(goes)

beravad = It is bad that Parvin should go on a journey.

(this-that) (rain) (comes) (cause)

65: (a) inke b@r@n biy@yad asb@be

(sorrow)(is)

ta?assof ast = That rain should fall is a pity.

(this)(cause) (sorrow) (is) (that)(rain)

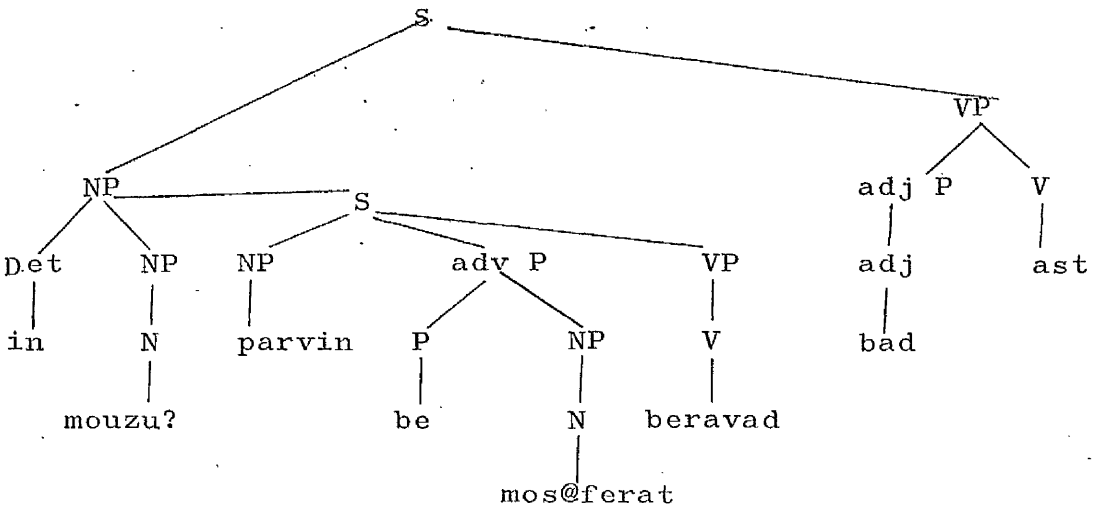
(b) in asb@be ta?assof ast ke b@r@n

(comes)

biy@yad= It is a pity that rain should fall.

64(a) and 65(a) show sentences with post-subjectival complements; in them the determiner dominated by NP>S is preserved and is followed by the complementizer (i.e. ke). On the other hand, 64(b) and 65(b) show the forms of sentences in which the determiner is not followed by the complementizer and the complementizer occurs between the matrix sentence and the complement.

First we give the deep structure of 64(a) and then we will justify it.



P.M.19.

As the phrase marker shows, the head of the NP construction is $\frac{\text{(this)(matter)}}{\text{in mouzu?}}$ (ie. Det+N) and the embedded sentence $\frac{\text{(Parvin)(to) (journey) (goes)}}{\text{parvin be mos@ferat beravad}}$ = "Parvin goes on a journey" is added to complete the meaning of in mouzu? = "this matter" or to add some information to it. We can see and examine the nature of this process in the course of speech. Suppose a speaker says $\frac{\text{(this)(matter) (very)(bad) (is)}}{\text{in mouzu? xeyli bad ast}}$ = "This matter is very bad". The sentence is not detailed semantically; so the hearer seeks more information and asks ce xeyli bad ast ="What is very bad?". The speaker would definitely reply: $\frac{\text{(this-that) (Parvin)}}{\text{inke parvin}}$ $\frac{\text{(to)(journey) (goes)}}{\text{be mos@ferat beravad}}$ = "that Parvin should go on a journey", or inke b@r@n biy@yad= "that rain should fall". Now if we want to form a semantically complete sentence, we should put together the stretch that he uttered before i.e. $\frac{\text{(this-that)(Parvin) (to) (journey) (goes)}}{\text{inke parvin be mos@ferat beravad}}$ $\frac{\text{(very) (bad)(is)}}{\text{xeyli bad ast}}$ = "That Parvin should go on a journey is very bad". Another point is why we put

mouzu? $= \begin{cases} \text{"matter"} \\ \text{"fact"} \\ \text{"subject"} \end{cases}$ as N in the deep structure.

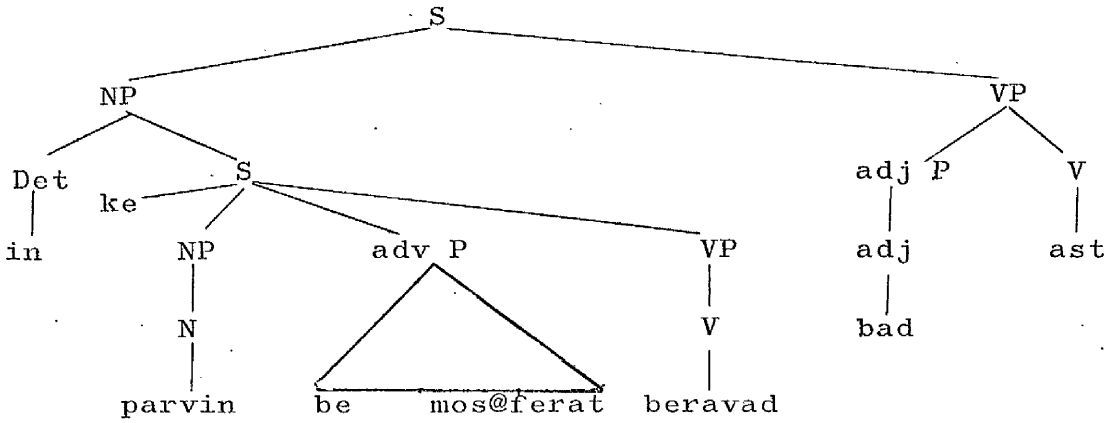
As we have discussed on p. 229 under "Determiners", in = "this" is a determiner. It follows that it should be followed by a noun. This noun, however, as the examples 64 and 65 show, is not in the surface structure. In the deep structure, we state mouzu? as a dummy noun which is omitted in the surface structure(i). We select mouzu? as a noun to appear in the deep structure because it has different meanings attached to it, and this fact accounts for its occurrence in different sentences. So, in the deep structure, we state mouzu? to which the whole string of complements refers . The T rule for generating sentence 64(a) from P.M.19 should delete mouzu? from the deep structure and introduce ke, i.e. the complementizer, after in.

T post-subjectival complement:

SD = X - Det - N - S - Y
1 - 2 - 3 - 4 - 5
⟹ oblig
SC = 1 - 2 - Ø-ke+4 - 5
Condition: 3 = mouzu?

After applying T post-subjectival complement, the tree diagram would have the shape:

(i) We have discussed the status of some determiners which can occur as a head noun in the surface structure in detail under "Pronominal Determiners" (p.241).



P.M.20.

And with an optional T rule, we can generate a sentence like 64(b) from P.M.20 :

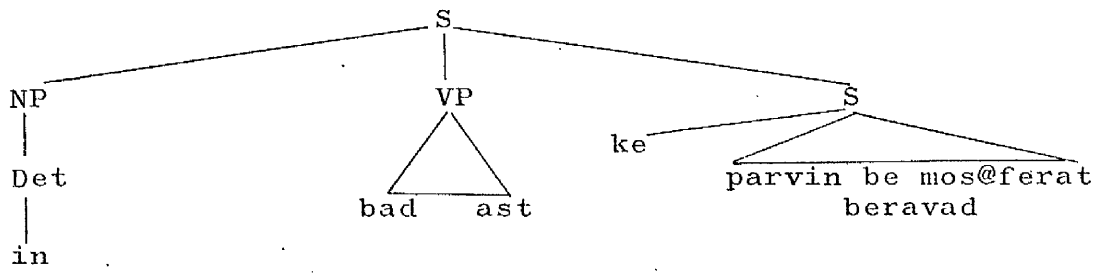
T post-subjectival complement replacement:

SD = X - Det - [ke + S] - Y - VP - Z
1 - 2 - 3 - 4 - 5 - 6

$\Longrightarrow$ option

SC = 1 - 2 - 5 - 3 - 4 - 6

After applying T post-subjectival complement replacement, the phrase marker would have the shape:



P.M.21.

List of Transformational Rules introdused in Chapter Two

T relative clause formation (restrictive):

$$SD = X - \left[_{NP}\ NP - \left[_{S}\ NP - \left(\begin{cases} NP \\ adj\ P \\ \left[_{PP}\ P\text{-}NP\ _{PP}\right] \end{cases} \right) - Y \right]_{S}\ _{NP}\right] - Z$$

$$1 - 2 - 3 - 4 - 5 - 6$$

$$SC = 1 - 2+\underline{i}\text{-}\underline{ke}\text{-}3\ (+\underline{i} \text{ if } 5 \text{ is } \underline{budan} \text{ or } \underline{\&odan})\ -4\ (+\underline{i} \text{ if } 5 \text{ is not } \underline{budan} \text{ or } \underline{\&odan})\ - 5 - \Longrightarrow 6 \text{ oblig}$$

Condition: (a) if 5 is budan or &odan, 2 and 3 must be identical and coreferential .

(b) if 5 is not budan or &odan, 2 and 4 must be identical and coreferential .

T pronominalization:

SD = X - NP - Y - NP-Z

1 - 2 - 3 - 4 -5

$\Longrightarrow$ oblig according to the rules of connected chart.

$$SC = 1 - 2 - 3 - \begin{cases} \emptyset \\ \text{pronoun} \end{cases} - 5$$

Condition: (a) 2 and 4 are identical and coreferential .

(b) 2 and 4 are dominated by different sentences.

T noun_phrase formation No.1

$$SD = X - \left[_{NP}\ N+\underline{i}-\underline{kc} - \left[_{S}\ \begin{Bmatrix} NP \\ adj\ P \\ [P\text{-}NP] \\ PP\quad PP \end{Bmatrix} - V - AUX\right]_{S}\ \right]_{NP} - Z$$

$$1 - 2+3-4 - \begin{Bmatrix} 5 \\ 5 \\ 5'\text{-}5'' \end{Bmatrix} - 6 - 7 - 8$$

$\Longrightarrow$ option

$$SC = 1 - 2+\underline{e}-\emptyset-\emptyset - \begin{Bmatrix} 5 \\ 5 \\ \emptyset\text{-}5'' \end{Bmatrix} - \emptyset - \emptyset - 8$$

Condition : 6 = copula

T sentence insertion:

$$SD = X - NP - NP - Conjun - NP_2 - NP_2 - X$$
$$1 - 2 - 3 - 4 - 5 - 6 - 7$$

$\Longrightarrow$ option

$$SC = 1 - 2 - 5 - \emptyset - 6 - 7 - 3$$

Condition: 2 identical and coreferential to 5.

T relative clause formation (non-restrictive):

$$SD = X - N - NP - NP - V - X$$
$$\begin{bmatrix} \pm\ proper \\ \pm\ generic \end{bmatrix}$$
$$1 - 2 - 3 - 4 - 5 - 6$$

$\Longrightarrow$ oblig

$$SC = 1 - 2 + \underline{ke} - \emptyset - 4 - 5 - 6$$

Condition: $2 = \begin{cases} [+\ proper] \\ [+\ generic] \end{cases}$

T apposition:

SD = X - N - ke - NP - V - X

1 - 2 - 3 - 4 - 5 - 6 ⟹ option

SC = 1 - 2 - Ø - 4 - Ø - 6

Condition: 5 = copula

T noun_phrase formation No. 2 :

$$SD = X - \underset{NP}{\left[NP + \underline{i} - \underline{ke} - \underset{S}{\left[\begin{Bmatrix} NP \\ adj\ P \\ PP \end{Bmatrix} \right.} \right.} - V - AUX \underset{S}{\left. \right]} \underset{NP}{\left. \right]} \underset{VP}{\left[Y - V \right.} \underset{VP}{\left. \right]} - Z$$

$$SC = 1 - 2 - 3 - 4 - 5 \quad 6 - 7 - \quad 8 - 9 - 10$$

$$\Longrightarrow \text{option}$$

$$1 - 2\begin{Bmatrix} +3 \\ +\underline{e} \end{Bmatrix} - Ø - 5 - \begin{Bmatrix} -Ø \\ +3 \end{Bmatrix} - \quad Ø - Ø - \quad 8 - 9 - 10$$

Condition: 6 and 9 = copula

5 = - PP

T pre-verbal complement:

SD = X - NP - NP - Y

1 - 2 - 3 - 4

⟹ oblig

SC = 1 - 2 - 4 - ke + 3

Condition: 3 dominates S and only S.

T post-subjectival complement:

SD = X - Det - N - S - Y

1 - 2 - 3 - 4 - 5

⟹ oblig

SC = 1 - 2 - Ø - ke+4 - 5

Condition: 3=mouzu?

T post-subjectival complement replacement:

SD = X - Det - [ke + S] - Y - VP - Z

1 - 2 - 3 - 4 - 5 - 6

⟹ option

SC = 1 - 2 - 5 - 3 - 4 - 6

CHAPTER THREE

Pronouns

Persian pronouns are derived from NP and not from the noun as always erroneously suggested. Their general syntactic behaviour is like that of NP. So we can consider them as a subdivision of NP. The following examples will show this point. Suppose one says:

(Parvin)(brother) (Hasan) (saw)(and)(he)
1: parvin bar@dare hasan r@ did va u r@
(to)(Ali) (introduce-did-he)
be ali mo?arrefi-kard = Parvin saw Hasan's brother and introduced him to Ali ;

and the hearer cannot understand the part of the sentence when the word u = "he" is uttered and asks:

(who) (to) (Ali) (introduce-did-he)
2: ke r@ be ali mo?arrefi-kard = Whom did he introduce to Ali?

The speaker would definitely answer:

(brother)(Hasan)
3: bar@dare hasan r@ = Hasan's brother,

which is obviously substituted by u = "he". This fact shows that the native speakers of Persian would interpret the word u = "he" in the sentence above as bar@dare hasan (brother)(Hasan) = "Hasan's brother". Consider another example which shows that first and second personal pronouns are also NP's in their deep structures. Suppose one says:

(Parviz) (dear) (brother) (I) (come) (here)
4: parvize aziz, bar@dare man, biy@ inj@
= Dear Parviz, my brother, come here;

and the hearer asks:

(to)(I) (said-you)(come)
5: be man gofti biy@ = Did you tell me to come?

and the speaker replies :

(yes) (to)(you) (said-I) (come)
6: bale be to goftam biy@ = Yes, I told you to come .

In the above conversation, (Parviz)(dear) parvize aziz = "dear Parviz" is replaced by man = "I " and to = "you" in 5 and 6 respectively. These very simple facts in Persian show that pronouns are derived from NP's. There is only one exception to this and that is the occurrence of the bound form of the pronoun in place of a noun which is the head of an NP construction. This is equivalent to the English pronoun one(i) when it is used to avoid the repetition of a noun.(ii) So we can have:

(Parvin)(one) (dress) (red) (bought)(and)(Azar)
7: parvin yek leb@se qermez xarid va @zar
(green-its) (bought)
sabza& r@ xarid = Parvin bought a red dress and Azar bought a green one.

(i) As B.H.Partee noted in Major Syntactic Structures of English (P.165) this English pronoun might be replaced by a noun, by a noun-phrase, or by a structure which is neither a noun nor a noun-phrase.

(ii) This is virtually confined to colloquial Persian .

(Parvin) (one) (dress) (long) (green)(and)(Azar)
8: parvin yek leb@se bolande sabz va @zar
(short-its) (bought)
kut@ha& r@ xarid = Parvin bought a long green dress and Azar bought a short one.

In 7 and 8, the bound form of the pronoun replaces the underlying noun which is identical and coreferential to the head of the NP construction. It should be noted here that replacing an N which is the head of an NP construction by the bound form of the pronoun is possible only if the N does not have the feature [+human] associated with it.

In other words, if the noun which is the head of NP construction is a person, we cannot replace it by a personal pronoun, and we have to replace the whole NP construction by a pronoun, or else repeat the identical NP. Consider the following examples:

(woman) (Iranian)(came)
9: (a) zane ir@ni @mad = The Iranian woman came.

(Iranian-her) (came)
(b) *ir@nia& @mad

9(b) is deviant because, there, we have replaced only the head of NP construction by a pronoun. If we wish to have a grammatical sentence, we have to replace the whole NP construction by a pronoun and have 10:

(she)(came)
10: u @mad = She came .

The following examples illustrate this point further :

(Parvin)(student) (good) (saw)(and) (Azar)
11: (a)* parvin &@gerde xub r@ did va @zar

(bad-its) (saw)
bada& r@ did = Parvin saw the good student and Azar saw the bad one .

(Parvin) (student)(good) (saw)(and)
(b) parvin &@gerde xub r@ did va

(Azar) (student) (bad) (saw)
@zar &@gerde bad r@ did = Parvin saw the good student and Azar saw the bad student.

(Parvin) (girl) (tall) (saw) (and)(Azar)
12: (a)* parvin doxtare boland r@ did va @zar

(short-its) (saw)
kut@ha& r@ did = Parvin saw the tall girl and Azar saw the short one .

(Parvin) (girl) (tall) (saw)(and)
(b) parvin doxtare boland r@ did va

(Azar) (girl) (short) (saw)
@zar doxtare kut@h r@ did = Parvin saw the tall girl and Azar saw the short girl.

As the examples show, 11(a) and 12(a), in which

we replace the head noun by a& (i.e. a bound form of the pronoun) , are deviant and 11(b) and 12(b) , in which the head noun is repeated, are grammatical .

The exception which we mentioned on pp.124-125 about replacement of the head noun by the bound form of the pronoun is virtually confined to colloquial Persian . For this reason , we do not make any provision for this exception in T Pronominalization (p. 139) . In the formal language , in such cases , the whole identical NP would be repeated in the second conjoined sentence .

An important point about pronominalization is that there are some cases where a sentence which has a pronoun in its surface structure can be interpreted in two ways . In such cases , the two underlying structures of the sentence will clarify the two different relations between the elements of the sentence . For example , 13 could be interpreted in two ways :

	(students)	(Parvin)	(annoy-did)	(and)
13 :	&@gerd@n	parvin r@	aziyyat-kardand	va

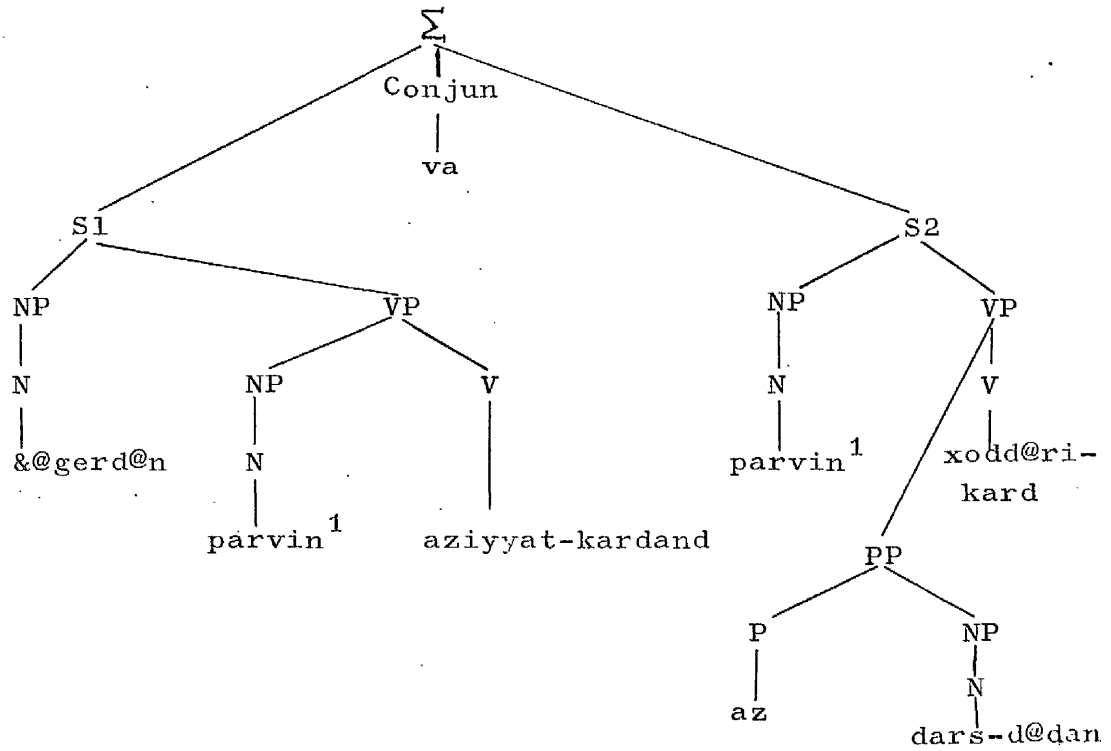
(he-she)(from)(teaching) (refrain-did)

u az dars-d@dan xodd@ri-kard =

The students annoyed Parvin and {she / he} stopped teaching.

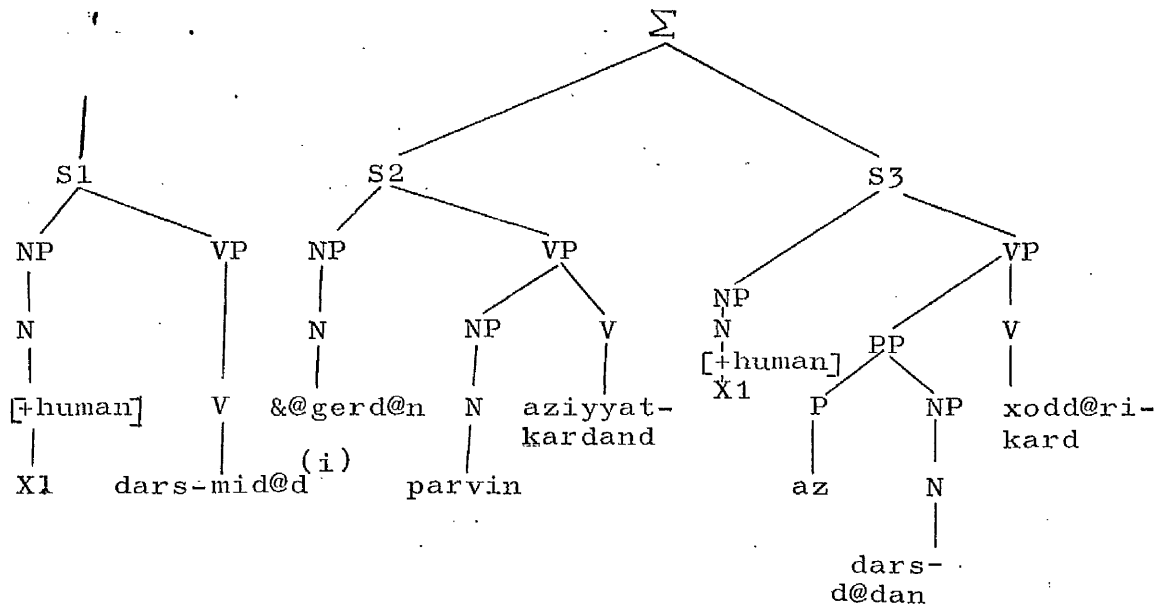
This may be interpreted in the following ways: Either as (a): The students annoyed Parvin[1] and Parvin[1] stopped teaching; or (b): The students annoyed Parvin and somebody else stopped teaching.

Here are the two different tree diagrams associated with the first and second interpretation respectively:



P.M.1.

Here the NP$\geq S_2$ which is identical and co-referential to NP$\geq$ VP$\geq S_1$ would be pronominalized (according to the rules of pronominalization which are given on p.141).



P.M.2.

Here NP$\geq S_3$ would be pronominalized becuase it is identical and coreferential to NP$\geq S_1$. Notice that we did not associate S_1 with S_2 and S_3 because we want to show that the process of pronominalization would not necessarily take place within one sentence. In P.M.2, S_1 is to show the context in which the sentence occurs. It also shows that u in 13, with the second interpretation, refers to a noun which has occured in the course of speech somewhere before 13 is uttered. We have shown the two identical and co-referential nouns in the deep structure by X which could be any noun with the feature [+human] .

Before we go on to the details of the process of pronominalization, we will introduce a table in which we illustrate the bound and free froms of pronouns. This can be a help in understanding the examples which we will give in the following section:

(i) dars-mid@d=" {he / she} was teaching".

	Singular		Plural	
	Free forms	Bound forms	Free forms	Bound forms
First Person	man	- am	m@	-em@n Θ-emun
Second Person	to &om@	-at Θ -et -et@n Θ -etun	&om@	-et@n Θ-etun
Third Person	u vey i&@n @n in Θ un Θ i&un	-e&@n -a& Θ -e& Θ -e&un	i&@n @nh@ inh@ Θ un@ Θ in@ @n@n in@n	-e&@n Θ-e&un

Table Two

Θ = Forms peculiar to the colloquial language.

Pronominalization

There are two points which are crucial in the process of pronominalization in Persian: a - The forward working of the process, b - The omission or pronominalization of identical and coreferential NP's.

Pronominalization in Persian takes place when

the antecedent has already been mentioned, i.e. when the process is forward (there is only one exeption to this generalization and we will discuss this on p.133). Consider examples 14,15 and 16 which are complex sentences and in which the NP of the embedded sentence and the NP of the matrix sentence are both subjects :

(when)(he)(came) (boy) (Parvin) (saw)
14: (a) vaqti u^1 @mad $pesar^2$ parvin r@ did
= When he came, the boy saw Parvin.

(when)(he) (came)$(boy)_1$ (Parvin) (saw)
(b)*vaqti u^1 @mad pesar parvin r@ did

(when)$(boy)_1$ (came) (he) (Parvin) (saw)
15: (a) vaqti pesar @mad u^2 parvin r@ did
= When the boy^1 came, he^2 saw Parvin.

(when)$(boy)_1$ (came) (he) (Parvin) (saw)
(b)*vaqti pesar @mad u^1 parvin r@ did
= When the boy^1 came, he^1 saw Parvin.

(when) (boy) (came) (Parvin) (saw)
16: vaqti pesar @mad parvin r@ did
= When the boy came, he saw Parvin.

14 is grammatical provided that u and pesar are not coreferential-as in 14(a). It follows that backward pronominalization in Persian is impossible, unlike in English, where, as Kuroda (1966) worked out, under cetain circumstances (i.e. when the antecedent is definite) the pronominalization can work backwards.(i) In Persian, this is impossible regardless of the definiteness or indefiniteness of the

(i) See the article "English Relativization and Certain Related Problems" in Modern Studies in English(Readings

→

antecedent. 15, too, as we will show (p.141) is grammatical if pesar and u refer to different persons as in 15(a). 16, however, in which there is no pronoun referring to pesar ="boy", means that the same boy who came saw parvin. We will discuss the possibilities of omission or pronominalization of identical and coreferential NP's in detail in the following pages. What we want to conclude here is that backward pronominalization is impossible in Persian. Here are some other examples of sentences which have embedded sentences in them:

(woman)(that)(due) (is)(with)(Hasan)(marry-does)
17: zani ke qar@r ast b@ hasan[1] ezdev@j-konad
(tomorrow)(he) (sees)
fard@ u[1] r@ mibinad = The woman who is to get married to Hasan will visit him tomorrow.

(woman)(that)(due) (is) (with) (he)
18: zani ke qar@r ast b@ u[1]
(marry-does) (tomorrow) (Hasan) (sees)
ezdev@j-konad fard@ hasan[2] r@ mibinad
= The woman who is to get married to him will visit Hasan tomorrow.

In 17, u refers to Hasan whereas in 18, u does not refer to Hasan and the sentence would only be grammatical if u and Hasan are not coreferential. Here again, in the English equivalent of 18, "him"

→ in Transformational Grammar) by D.A. Reibel and S.A. Schane, pp. 264-287 (and, in particular, the footnote to p. 276).

can refer to Hasan [(i)]. 19 and 20 show that in two sentences which are conjoined the process of pronomonalization cannot work backwards:

	(I)	(Hasan)		(saw)	(and)	(to)	(he)	(story)
19:	man	hasan^{1}	r@	didam	va	be	u^{1}	d@st@n

(said-I)
r@ goftam = I saw Hasan and I told him the story.

	(I)	(he)		(saw)	(and)	(to)	(Hasan)	(story)
20:	man	u^{1}	r@	didam	va	be	hasan^{2}	d@st@n

(said-I)
r@ goftam = I saw him and I told the story to Hasan.

Again, in 19, u = "he " refers to hasan (i.e. forward pronominalization takes place). But 20 can be grammatical only if u and hasan are not co-referential.

The exception which we mentioned above is the case when we use the bound form of the pronoun in its possessive case. Consider the following examples:

(i) R.W. Langacker (in Modern Studies in English, edited by D.A.Reibel and S.A.Schane, p.160) notices two major restrictions on pronominalization in English: 1-The NP which is pronominalized should be preceded by the NP which is identical and coreferential to it; 2- In the embedded sentence, the NP which is pronominalized is the one which is commanded by identical and coreferential NP. The relation of command does not work in Persian.

(Prime Minister) (in) (speech-his) (said)
21: naxostvazir dar soxanr@nia& goft
(that)
ke ..... = The Prime Minister said in his speech that .....

(in) (speech-his) (Prime Minister)(said)(that)
22: dar soxanr@nia& naxostvazir goft ke....
= In his speech, the Prime Minister said that....

In 21 the pronominalization works forward. We have underlined a& (for the third person singular). Notice that we cannot construct 22 with the free form of the pronoun (i.e. u = "he"). Thus 23 is deviant:

(in) (speech) (he) (Prime Minister)(said)
23:* dar soxanr@niye u naxostvazir goft
(that)
ke....

So , 24, too, is not grammatical if we want u to refer to naxostvazir ="Prime Minister".

(in)(room) (he) (Prime Minister)(said)(that)
24: dar ot@qe u [1] naxostvazir [2] goft ke....
= In his room, the Prime Minister said that .....

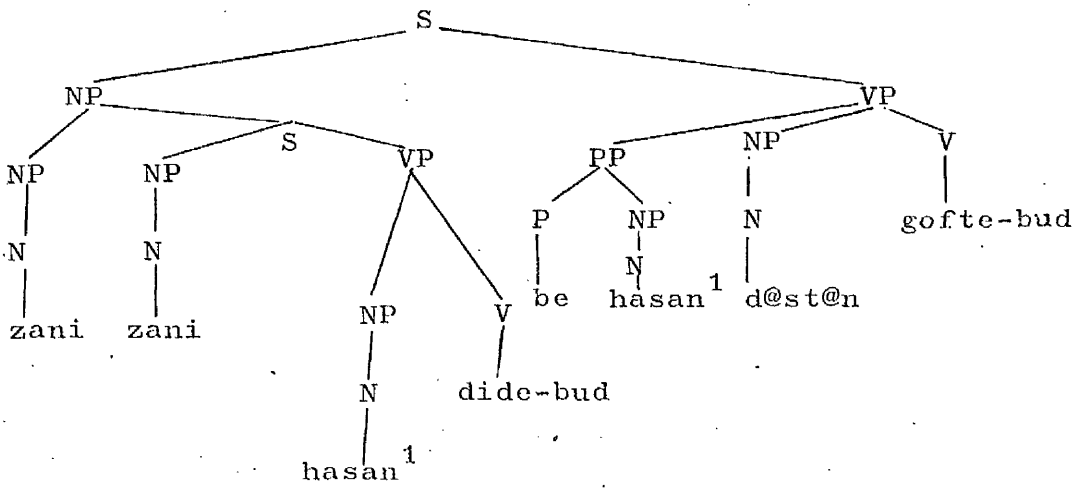
But 25, in which the bound form of the pronoun occurs, is grammatical if a& refers to naxostvazir.

(in)(room-his)(Prime Minister) (said)(that)
25: dar ot@qa& [1] naxostvazir [1] goft ke....
In his room, the prime minister said that.....

Here we come back to the conditions under which the process of pronominalization takes place. There are two environments in which pronominalization takes place. One is in a complex sentence in which the identical noun-phrase of the embedded sentence is pronominalized if it is preceded by the identical and coreferential noun-phrase in the matrix sentence. If it is followed by it, however, the identical noun-phrase of the matrix sentence is pronominalized. For instance, in 26, the identical and coreferential noun-phrase hasan is pronominalized in the matrix sentence, because it is preceded by the one in the embedded sentence in the underlying structure.

(woman) (that) (Hasan) (had seen) (to)
26: zani ke hasan r@ dide-bud be
(he) (story) (had said)
u d@st@n r@ gofte-bud = The woman who had seen Hasan had told him about the event.

P.M.3 shows the underlying structure of 26:

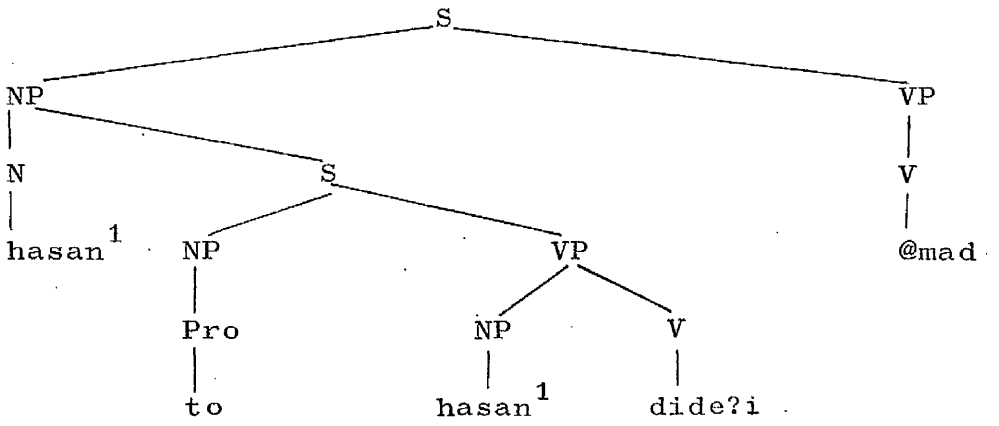


P.M.3.

And in the sentence 27, the identical NP of the embedded sentence is pronominalized because it is preceded by the one in the matrix sentence:

(Hasan)(that)(he) (have seen-you)(came)
27: hasan ke u r@ dide?i @mad = Hasan, whom you have seen, came.

The P.M. associated with the deep structure of 27 would roughly be:



P.M.4.

The examples show that the relation referred to as "precedes" is the crucial one in the process of pronominalization in Persian.

The second environment in which pronominalization takes place is where there are two conjoined sentences; and in this case the NP of the second conjoined sentence would also be pronominalized.

Here is an example:

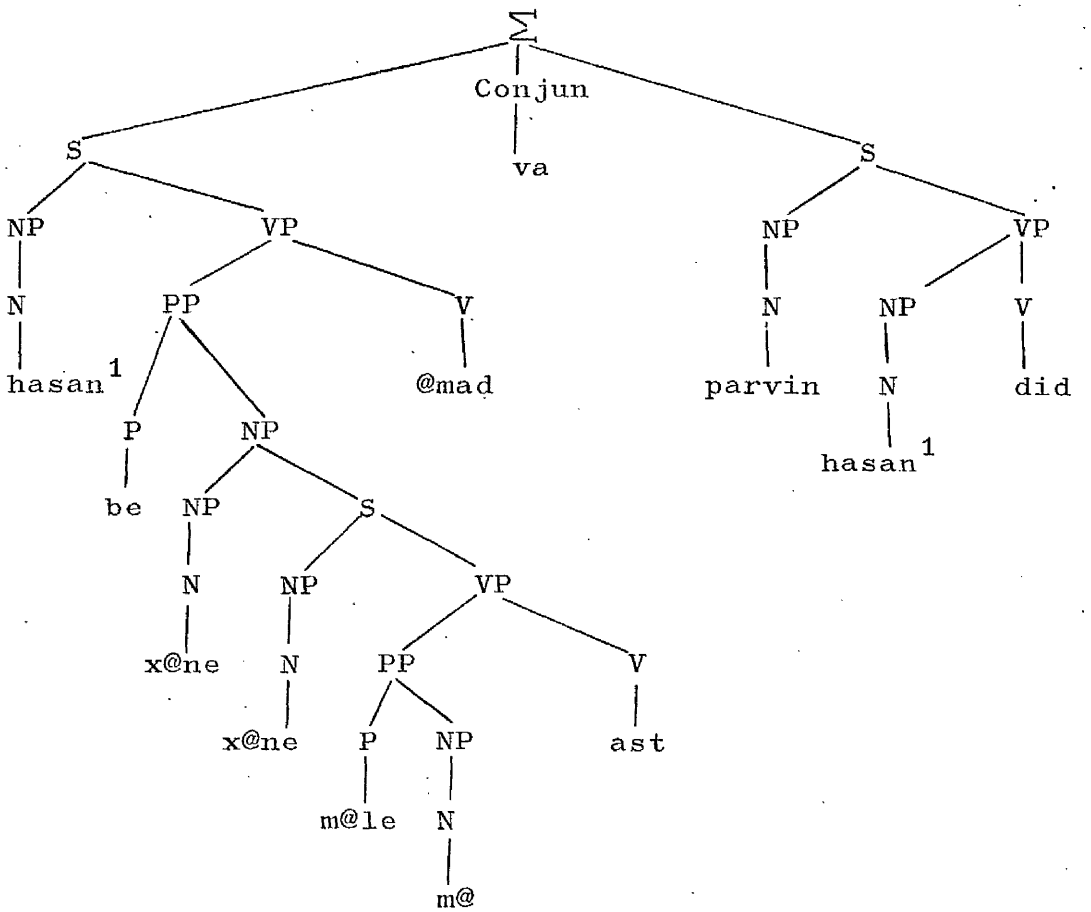
(Hasan) (to) (house) (we) (came) (and)(Parvin)

28: hasan be x@neye m@ @mad va parvin

(he) (saw)

u r@ did = Hasan came to our house and Parvin saw him .

The phrase marker associated with the deep structure of 28 is shown by P.M.5.



P.M.5.

Therefore, the generalization which we can make about pronominalization in Persian is as follows: The identical NP which is preserved in the surface structure is the one that precedes in the deep structure, and the one which follows is either pronominalized or omitted in the surface structure according to the rules which we will give later.

The process of pronominalization is quite a complicated one in Persian because we cannot pronominalize the identical and coreferential noun-phrase in the embedded sentence, or the second conjoined sentence, in all cases. Sometimes, we have to pronominalize it and sometimes, we have to omit it. In the sentences where we have to omit the identical and coreferential NP, if we pronominalize it, either it causes ambiguity or the resulting sentence is rendered ungrammatical.

The process of pronominalization in Persian is the case that might prove the deficiency of T.G. and the need for some modification of the theory. Although by showing the deep structures of the sentences in which there are pronouns we can show the actual relation between elements of the sentences, we cannot give a compact general rule for getting to the surface structure from the deep structure. The

conditions are varied and the whole process is so complicated that it cannot be captured by one or two rules. So, one of the tasks of the transformational rules, which is generalization, is not practicable in the field of pronominalization in Persian. In such circumstances where the data are so complicated, we suggest that we should have a chart in addition to a T rule and connected to it. The rule shows the general basis of changes which have to take place from deep to surface structure. And the chart shows the different conditions under which these changes take place. For instance, in the case of pronominalization in Persian, the general change would be the pronominalization or omission of the identical and coreferential NP which follows. The chart would show the different conditions for the application of the general rule. The method suggested is an economical one which shows the whole process as well. Therefore, on the basis of this suggestion, T pronominalization would be:

T pronominalization:

SD = X - NP - Y - NP - Z

1 - 2 - 3 - 4 - 5

$\Longrightarrow$ obligatory according to the rules of the connected chart.

SC = 1 - 2 - 3 - $\begin{cases} \emptyset \\ \text{pronoun} \end{cases}$ - 5

Condition: (a) 2 and 4 are identical and coreferential.
(b) 2 and 4 are dominated by different sentences.

The rule shows that if we have two sentences within which we have two identical and coreferential NP's we have to pronominalize or omit the second identical NP according to the rules which are given in the connected chart.

(i)

This is the chart which shows the whole process :

$NP_1 > S_1$

$\Longrightarrow \emptyset$

Condition : 1 : the sentence is embedded

2 : $NP_1 > S_1 = NP > S$ and the sentence is conjoined

$\Longrightarrow$ Pro

Condition: $NP_1 > S_1 = \begin{cases} NP > VP \\ NP > PP \end{cases}$ and the sentence is conjoined with va="and"

Pro

$\Longrightarrow$

$\emptyset$

Condition: $NP_1 > S_1 = \begin{cases} NP > VP \\ NP > PP \end{cases}$ and the sentence is conjoined with conjunctions other than va="and" and azinke = "for the reason that"

$NP_1 > VP_1$

$\Longrightarrow \emptyset$.

Condition: $NP_1 > VP_1 = NP > VP$ and the sentence is embedded.

$\Longrightarrow$ Pro

Condition: 1 : $\underset{NP_1}{[X + N_{[+\text{animate}]} + Y]} > VP_1 = NP > PP$ and the sentence is embedded.

2 : $NP_1 > VP_1 = NP > S$

3 : $NP_1 > VP_1 = \begin{cases} NP > PP \\ NP > S \end{cases}$ and the sentence is conjoined.

$\Longrightarrow \begin{cases} \text{Pro} \\ \emptyset \end{cases}$

Condition: 1 : $\underset{NP_1}{[X + N_{[-\text{animate}]} + Y]} > VP_1 = NP > PP$ and the sentence is embedded.

2 : $NP_1 > VP_1 = NP > VP$ and the sentence is conjoined.

$NP_1 > PP_1 \Longrightarrow$ Pro

$NP_1 \Longrightarrow \emptyset$

Condition: the embedded sentence is equational.

(i) In this chart, "Pro" refers to either form of the pronoun-bound or free. S_1, NP_1, VP_1 and PP_1 relate to the embedded or the conjoined sentence. S, NP, VP and PP relate to the matrix sentence .

We have arranged this chart according to the nodes which dominated the NP which has to be pronominalized or omitted, and not according to the embedded and conjoined sentences because if we had arranged them according to the embedded and conjoined sentences, we would have had a greater number of repeated rules.

Here is the illustration and justification for each rule which is given in the chart. We give examples for each case separately:

1: $NP_1 > S_1 \Longrightarrow \emptyset$

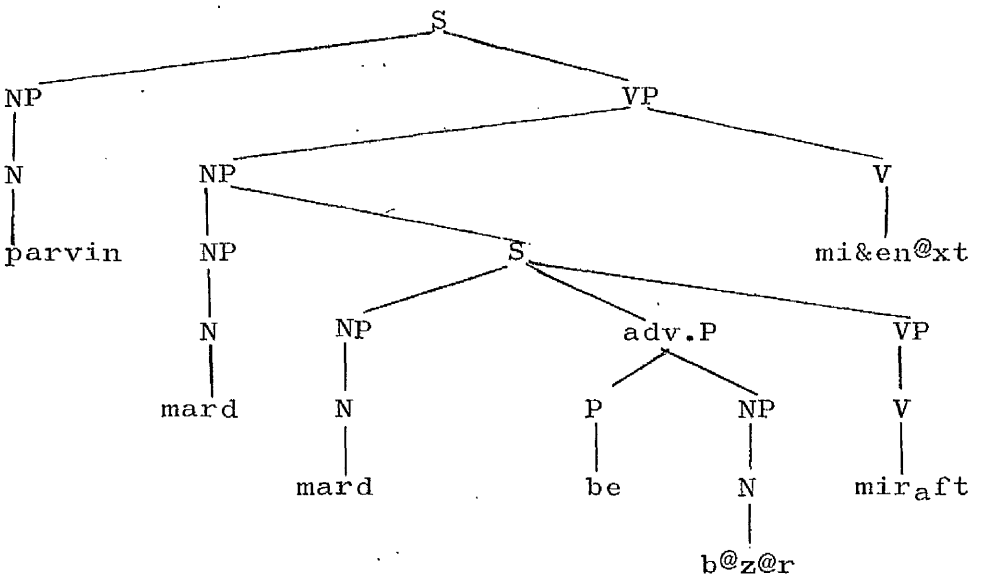
Condition: $NP_1 > S_1$ is embedded.

As the above formula shows, if a noun-phrase which is repeated in the embedded sentence is the subject of the embedded sentence, we have to omit it, otherwise the sentence is not well formed. Here is an example. The underlying structure of the sentence 29 is shown by P.M.6.

	(Parvin)	(man)		(that)	(to)	(bazaar)	(was going)
29:	parvin	mardi	r@	ke	be	b@z@r	miraft

(knew)

mi&en@xt = Parvin knew the man who was going to the bazaar.



P.M.6.

We have to omit $NP_1 > S_1$ from the underlying structure. If we were to pronominalize $NP_1 > S_1$, the resulting sentence would be 30 which is an ungrammatical sentence.

	(Parvin)	(man)		(that)	(he)	(to)	(bazaar)
30:*	parvin	mardi	r@	ke	u	be	b@z@r

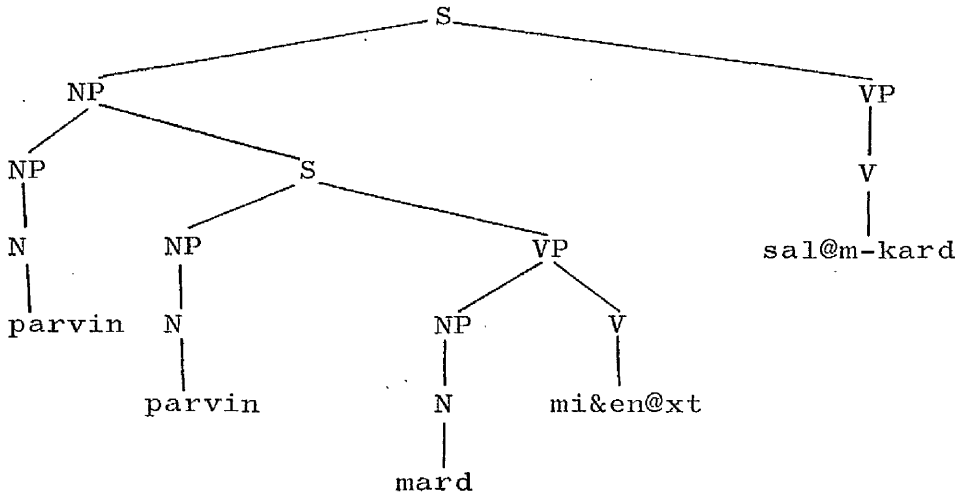
(was going)(knew)
miraft mi&en@xt

In 30, $NP_1 > S_1$ is identical to NP > VP of the matrix sentence. If it is identical to NP > S it is still to be omitted. Consider the following sentence:

	(Parvin)	(that)	(man)		(knew)	(hello-did)
31:	parvin	ke	mard	r@	mi&en@xt	sal@m-kard

= Parvin who knew the man said "Hello".

The underlying structure of 31 is shown by P.M.7:



P.M.7.

If we were not to omit the identical NP but, instead, were to pronominalize it, the resulting sentence would be ungrammatical:

	(Parvin)	(that)	(she)	(man)		(knew)
32;*	parvin	ke	u	mard	r@	mi&en@xt

(hello-did)
sal@m-kard.

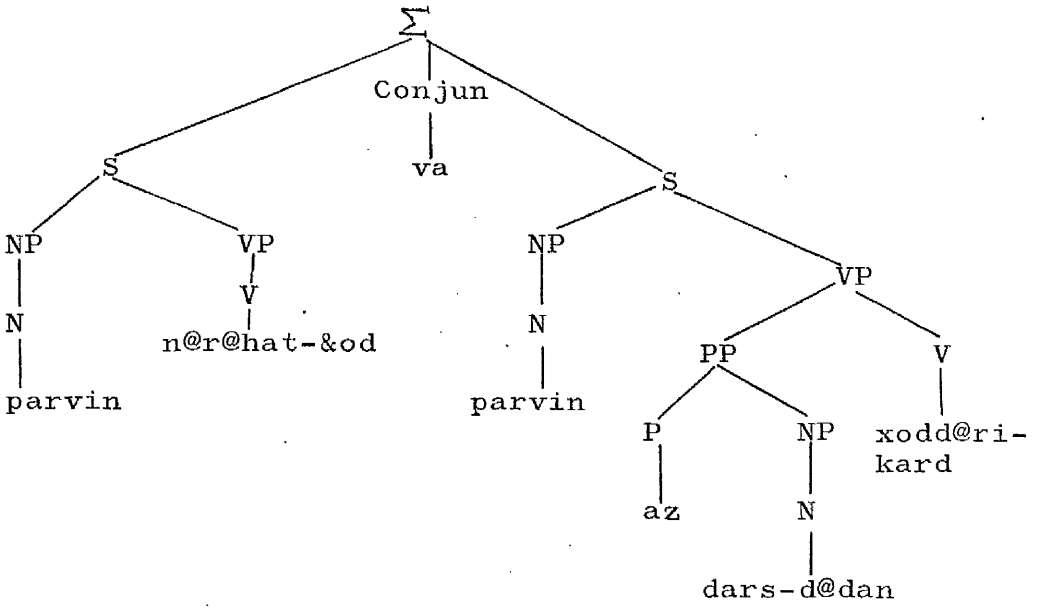
2: $NP_1 > S_1 \Longrightarrow \emptyset$

Condition: $NP_1 > S_1$ = NP> S and the sentence is conjoined .

The above formula shows that if we have two conjoined sentences we have to omit the identical

noun-phrase in the second conjoined sentence if it is identical to NP> S i.e. the subject of the first conjoined sentence. Here is an example. The underlying structure of sentence 33(a) is roughly shown by P.M.8.

33(a). (Parvin)(upset -became) (and) (from) (lesson-giving) (refrain-did)
parvin n@r@hat-&od va az dars-d@d@n xodd@ri-kard = Parvin was upset and stopped teaching.



P.M.8.

If we do not omit the identical NP in the second conjoined sentence and pronominalize it, the pronominalized NP refers to somebody else whose name has been mentioned before. The underlying structure of 33(b), in which the identical NP is pronominalized, will roughly be P.M.9.

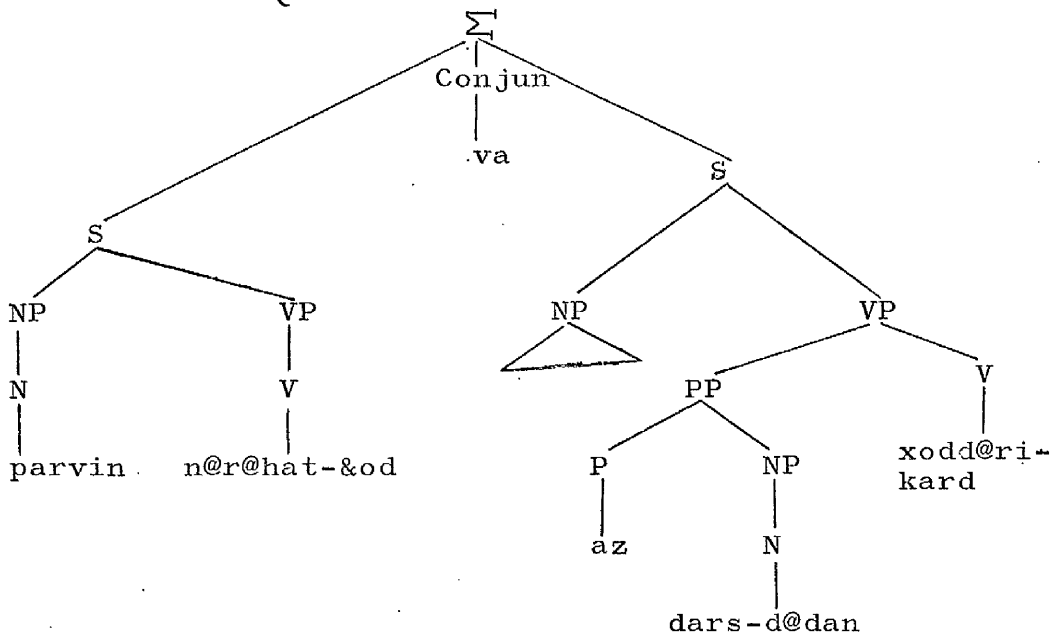
(Parvin) (upset -became) (and) (he) (from)

33(b): parvin^{1} n@r@hat-&od va u^{2} az

(lesson-giving) (refrain-did)

dars-d@dan xodd@ri-kard = Parvin^{1} was

upset and {she^{2} / he} stopped teaching.



P.M.9.

3: $NP_1 > S_1 \Longrightarrow$ Pro

Condition: $NP_1 > S_1 = \begin{cases} NP > VP \\ NP > PP \end{cases}$

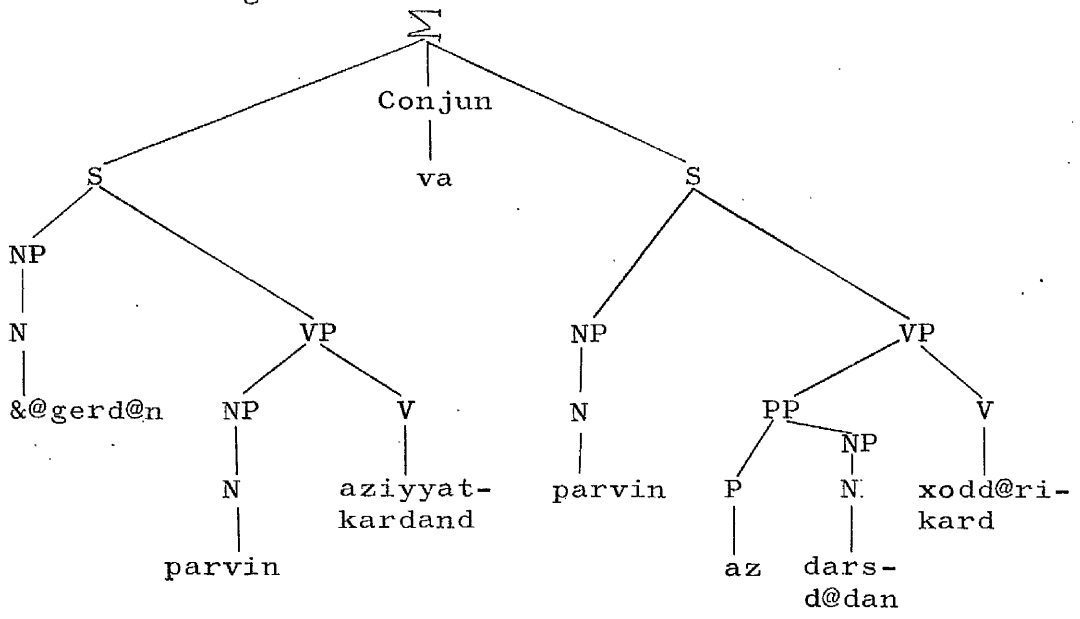
and the sentence is conjoined with va.

The rule above shows that the identical NP>S in the second conjoined sentence should be pronominalized if it is identical to NP> VP or NP> PP in the first conjoined sentence and the two sentences are conjoined with va = "and". Here are some examples:

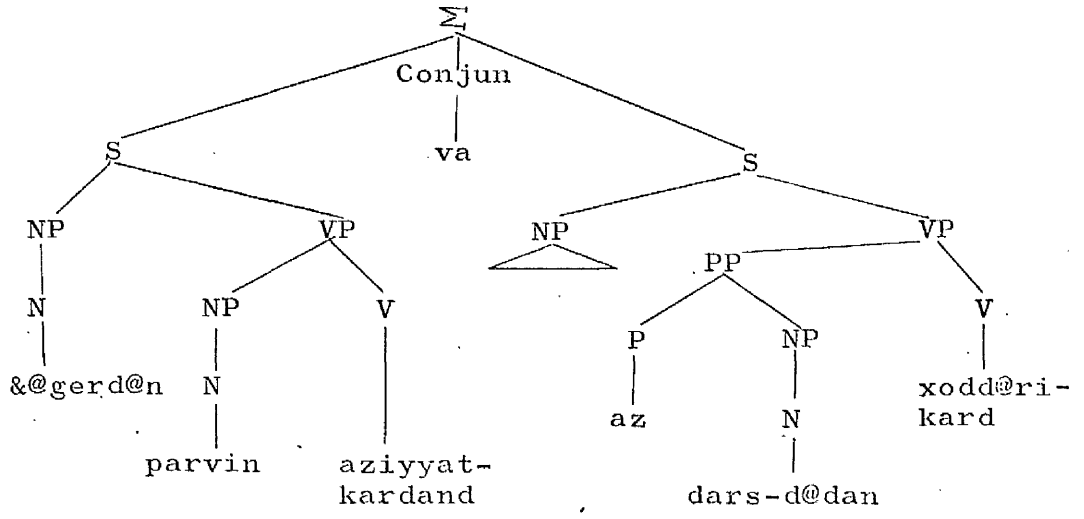
34(a) has two underlying sentences associated with it and these are shown by P.M.10 and P.M.11.

(students) (Parvin) (annoy -did-they) (and)
34(a) &@gerd@n parvin[1] r@ aziyyat-kardand va

(he) (from) (lesson-giving) (refrain-did)
u[1-2] az dars-d@dan xodd@ri-kard = The students annoyed Parvin[1] and {she[1-2] / he} stopped teaching.



P.M.10.



P.M.11.

P.M.11 shows the underlying structure associated with the second interpretation of 34(a) when u does not refer to Parvin, and P.M.10 shows the underlying structure associated with the first interpretation of 34(a) when u does refer to Parvin. Although 34(a) is ambiguous, as we have shown, we cannot omit the identical NP and we have to pronominalize it. Otherwise the resulting sentence would be ungrammatical. Thus we cannot have 34(b) :

(students)(Parvin) (annoy -did-they)
34(b): *&@gerd@n parvin r@ aziyyat-kardand
(and)(from)(lesson-giving) (refrain-did - she)
va az dars-d@dan xodd@ri-kard.

The same rule holds when $NP_1 > S_1$ = NP> PP. Thus the sentence 35(a) has two meanings :

(students) (to) (Parvin) (swore)
35(a): &@gerd@n be $parvin^1$ do&n@m-d@dand
(and)(she) (from)(classroom) (out-went)
va u^{1-2} az kel@s birun-raft =
The pupils swore at $Parvin^1$ and she^{1-2} left the classroom. ($\underline{u}$ = {"she" / "he"} might refer to Parvin or somebody else).

Here again we cannot omit the identical NP because the resulting sentence would be ungrammatical:

(students) (to) (Parvin) (swore) (and)
35(b): *&@gerd@n be parvin do&n@m-d@dand va

(from)(classroom)(out-went-she)
az kel@s birun-raft

4: $NP_1 > S_1 \Longrightarrow \begin{cases} Pro \\ \emptyset \end{cases}$

Condition: $NP_1 > S_1 = \begin{cases} NP > VP \\ NP > PP \end{cases}$ and the two sentences are conjoined with a conjunction other than va and azinke.

The above rule shows that we can omit or pronominalize $NP_1 > S_1$ if it is identical to NP > VP or NP > PP, and the two sentences are conjoined with conjunctions other than va and azinke. Here are two sentences of the same meaning :

(students)(Parvin) (annoy -did-they) (that)
36: (a) &@gerd@n parvin r@ aziyyat-kardand ke

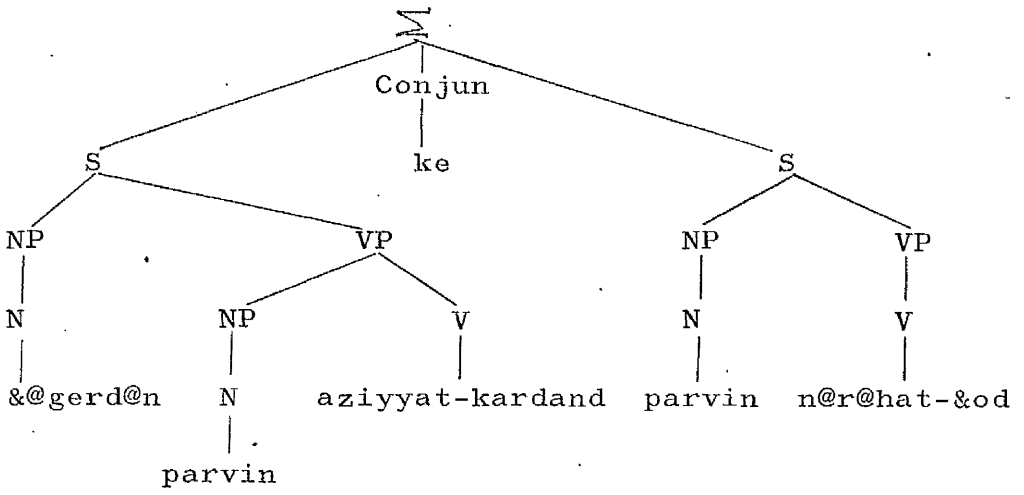
(she)(upset-became-she)
u n@r@hat-&od

(students)(Parvin) (annoy -did-they)
(b) &@gerd@n parvin r@ aziyyat-kardand

(that)(upset-became -she)
ke n@r@hat-&od = It was because the students annoyed Parvin that she got upset.

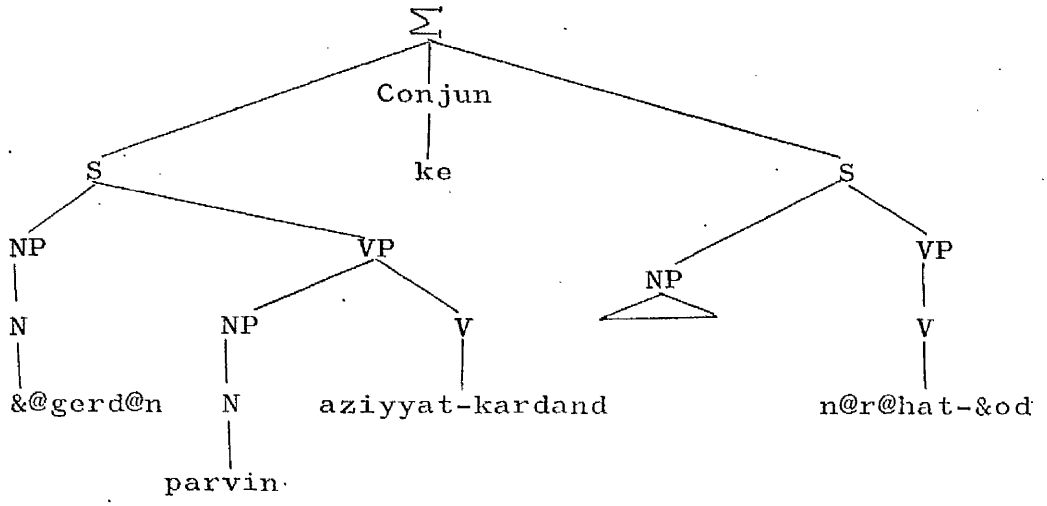
In (a), we have pronominalized the identical NP and in (b), we have omitted it; and both

sentences are grammatical. 36(a), however, has another meaning associated with it, i.e. $\underline{u} = \begin{cases} \text{"she"} \\ \text{"he"} \end{cases}$ might not refer to Parvin. So, 36(a) has two underlying structures. Here is the underlying structure common to 36(a) and 36(b):



P.M.12.

P.M.13 shows the second underlying structure asscciated with 36(a) in which $\underline{u} = \begin{cases} \text{"he"} \\ \text{"she"} \end{cases}$ does not refer to Parvin:



P.M.13.

With another conjunction i.e. amm@ = "but", we have the same result.

(students) (Parvin) (annoy -did-they)

37: (a) &@gerd@n parvin[1] r@ aziyyat-kardand

(but) (he,she)(upset - not-became{he / she})

amm@ u[1-2] n@r@hat-na&od

(students) (Parvin) (annoy -did-they)

(b) &@gerd@n parvin r@ aziyyat-kardand

(but) (upset-not-became-she)

amm@ n@r@hat-na&od = The students annoyed Parvin but she did not become upset.

Here again, 37(a) has two meanings and two underlying structures associated with it whereas 37(b) has only one meaning and one underlying structure, which is shared by one of the underlying structures of 37(a) .

5: NP>VP $\Longrightarrow$ Pro

Condition: $\underset{NP_1}{\left[\begin{array}{c} X + N \\ [\mp animate] \end{array}\right.} \left.\begin{array}{c} +Y \\ \} NP_1 \end{array}\right]_{>VP_1}$ = NP>PP

and the sentence is embedded.

The rule shows that when the identical NP in the embedded sentence is NP>VP, we should pronominalize it if it is identical and coreferential to NP>PP

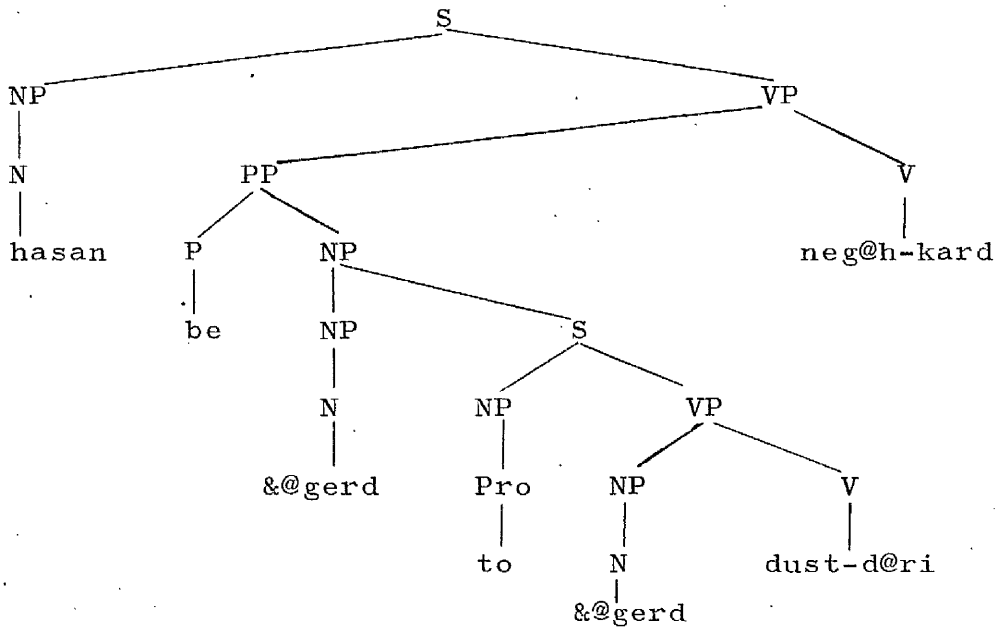
in the matrix sentence, and the noun which is the head of the noun_phrase has the feature [+ animate] associated with it. Consider the following example:

	(Hasan)	(to)	(student)	(that)	
38:	hasan	be	&@gerdi	ke	(he) (like-you) / u r@ dust-d@ri / (like-him-you) / dusta&-d@ri

(looked)

neg@h-kard = Hasan looked at the student whom you like.

The underlying structure of 38 would roughly be:



P.M.14.

We have to pronominalize NP>VP in the embedded sentence otherwise the sentence would be ungrammatical.

(Hasan) (to) (student) (that)(like-you)
39: * hasan be &@gerdi ke dust-d@ri
(looked)
neg@h-kard.(i)

6: $NP_1 > VP_1 \Longrightarrow$ Pro.

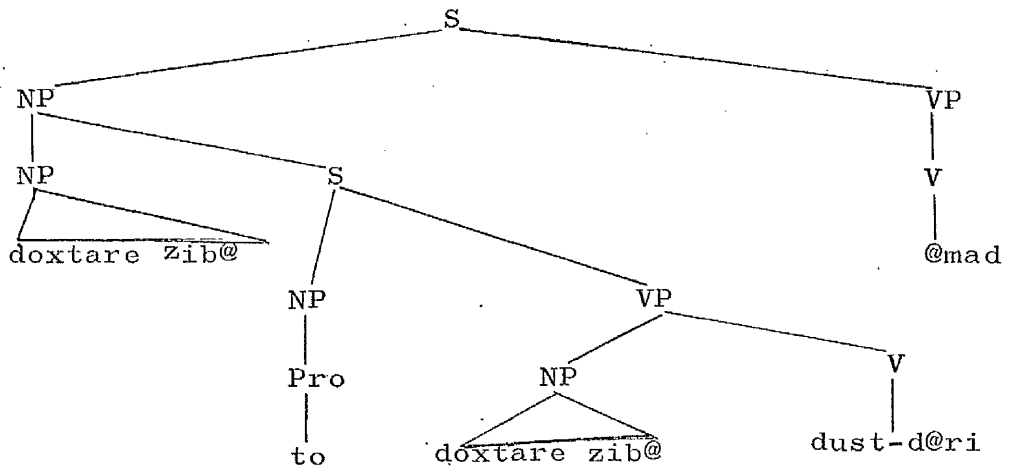
Condition: $NP_1 > VP_1 = NP > S$.

The rule shows that we have to pronominalize NP>VP if it is identical with NP>S. Here is an example. The underlying structure of sentence 40 would roughly be P.M.15.

(girl)(beautiful)(that)(like-her-you)(came)
40: doxtare zib@?i ke dusta&-d@ri @mad =
The beautiful girl , whom you like , came.

(i) I have discussed the ungrammaticality of this sentence with native speakers of Persian. Some of them, when they heard the sentence for the first time, said it was not ungrammatical. So, I discussed it with them on other occasions, and I paired it with one which has the bound form of pronoun on it,

(Hasan) (to)(student)(that)(like-him-you)(looked)
i.e. hasan be &@gerdi ke dusta&-d@ri neg@h-kard.
All of them agreed that the one without the pronoun was not well formed .



P.M.15.

And we have to pronominalize $NP_1 > VP_1$ otherwise the resulting sentence would be ungrammatical. Thus, 41 is deviant:

(girl)(beautiful)(that) (you)(like-you) (came)
41:* doxtare zib@?i ke to dust-d@ri @mad

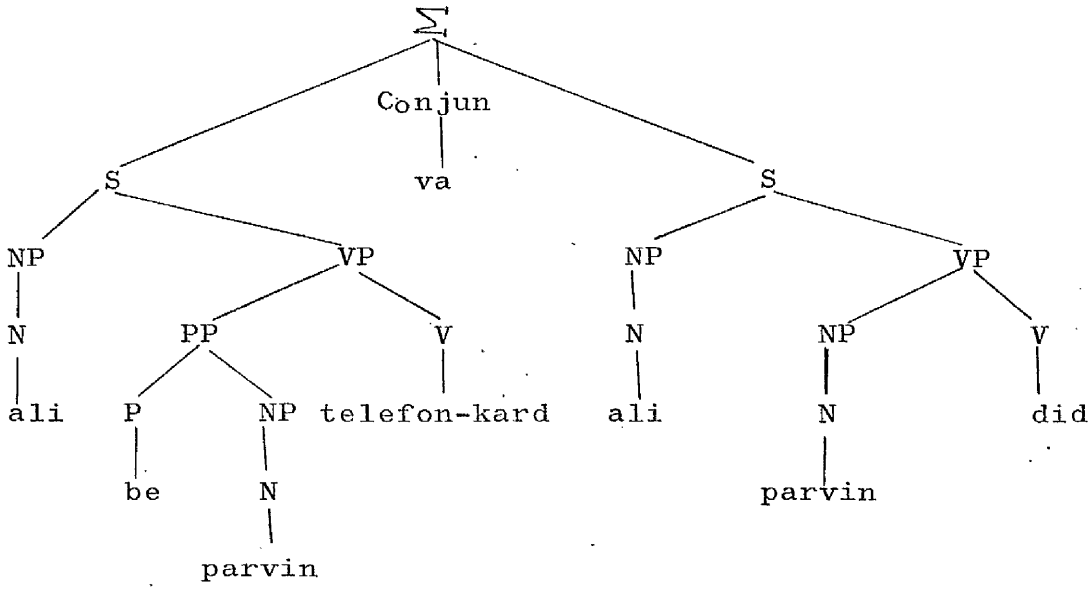
7: $NP_1 > VP_1 \Longrightarrow$ Pro

Condition: $NP_1 > VP_1 = \begin{cases} NP > PP \\ NP > S \end{cases}$

and the sentence is conjoined.

As the rule shows, we have to pronominalize $NP_1 > VP_1$ in the second conjoined sentence, if it is identical to NP>PP or NP>S of the first conjoined sentence. Here are some examples for the first and second case respectively:

(Ali) (to) (Parvin) (telephoned) (and) (she)
42: ali be parvin telefon-kard va u r@
(saw)
did = Ali telephoned Parvin and saw her.



P.M.16.

In P.M.16, the NP>VP in the second conjoined sentence should be pronominalized and it cannot be omitted. Otherwise the resulting sentence would be ungrammatical:

(Ali)(to) (Parvin)(telephoned) (and)(saw)
43:* ali be parvin telefon-kard va did

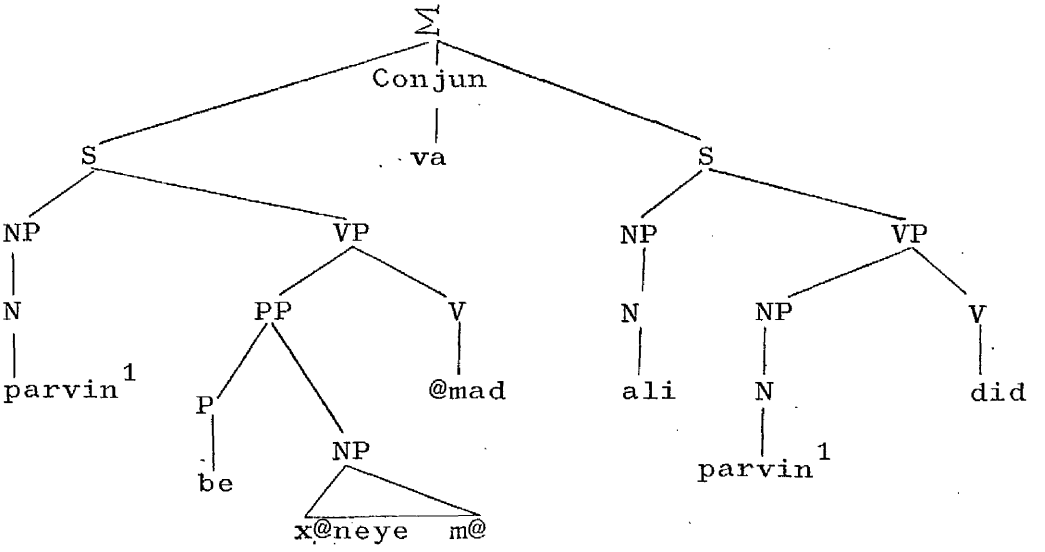
And here is an example with NP_1>VP_1, which is identical and coreferential to NP>S.

(Parvin)(to)(home) (we) (came) (and) (Ali)(she)
44: parvin be x@neye m@ , @mad va ali u

(saw)

r@ did = Parvin came to our house and Ali saw her.

The underlying structure of the sentence 44 is shown by P.M.17.



P.M.17.

$NP_1 > VP_1$, from the tree diagram above, should be pronominalized and it cannot be omitted, otherwise the resulting sentence would be deviant :

(Parvin)(to) (home) (we) (came)(and)(Ali)(saw)

45:* parvin be x@neye m@ @mad va ali did

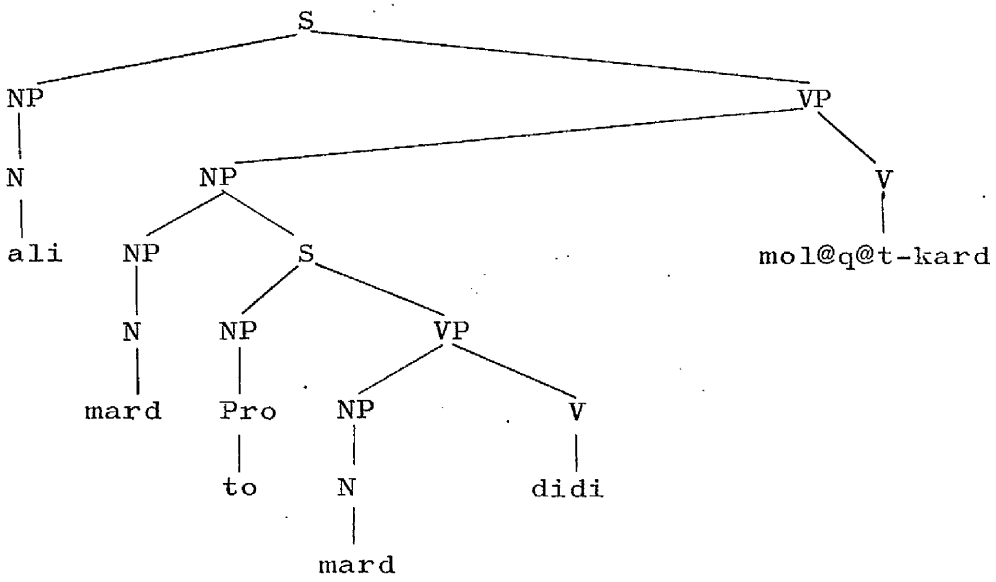
8: $NP_1 > VP_1 \Longrightarrow \emptyset$

Condition: $NP_1 > VP_1 = NP > VP$ and the sentence is embedded.

As the rule shows, we have to omit $NP_1 \geq VP_1$ from the embedded sentence if it is identical and coreferential to NP≥VP. Thus the sentence 46 is grammatical.

(Ali) (man) (that)(saw-you) (visited)
46: ali mardi r@ ke didi mol@q@t-kard

= Ali visited the man whom you saw. And the underlying structure of it would be roughly:



P.M.18.

Also we should delete NP≥VP from the underlying structure otherwise the resulting sentence would be ungrammatical. Therefore, 47 is deviant:

(Ali) (man) (that)(he) (saw-you)(visited)
47: * ali mardi r@ ke u r@ didi mol@q@t-kard

9: $NP_1 > VP_1 \Longrightarrow \begin{cases} Pro \\ \emptyset \end{cases}$

Condition: $NP_1\left[X + \underset{[-animate]}{N}\ ^{+Y}\right]_{NP_1} > VP_1 = NP > PP$

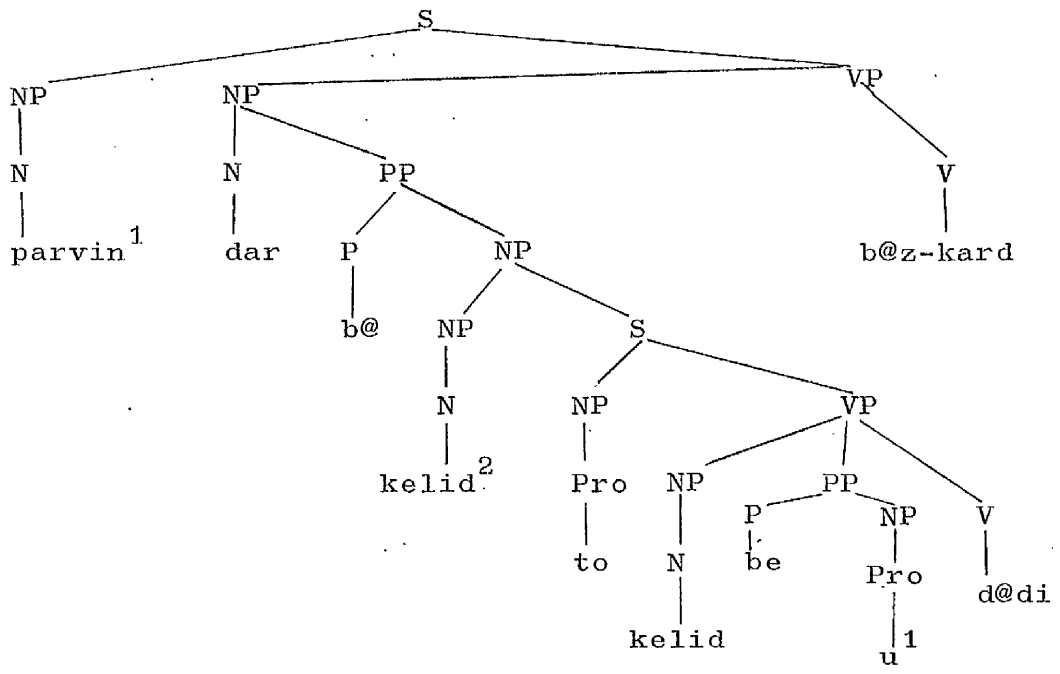
and the sentence is embedded.

This rule shows that we can pronominalize or omit the NP>VP from the embedded sentence if it is identical and coreferential to NP>PP and the noun which is the head of NP construction has the feature [- animate] associated with it. So we can have either of the following sentences:

(Parvin)(with) (key) (that)(that) (to)(she)
48(a) parvin b@ kelidi ke @n r@ be u
(gave-you)(door) (opened)
d@di dar r@ b@z-kard = Parvin opened the door with the key you gave her.

(Parvin) (with) (key) (that)(to)(she)(gave-you)
(b) parvin b@ kelidi ke be u d@di
(door) (opened)
dar r@ b@z-kard = Parvin opened the door with the key you gave her.

The underlying structure of 48(a) and 48(b) would be as shown roughly by P.M.19.



P.M.19.

10: $NP_1 \geq VP_1 \Longrightarrow \begin{cases} Pro \\ \emptyset \end{cases}$

Condition: $NP_1 \geq VP_1$ = NP≥VP and the sentence is conjoined.

As the rule shows, if $NP_1 \geq VP_1$ in the second conjoined sentence is identical to NP≥VP in the first conjoined sentence, we can pronominalize it, or we can omit it. Thus, both of the following sentences are grammatical:

		(Parvin)	(implement)	(iron)	(pack-did)
49:	(a)	parvin	bas@te	otu	r@ jam?-kard
		(and)	(to)	(room)	(took)
		va	be	ot@q	bord

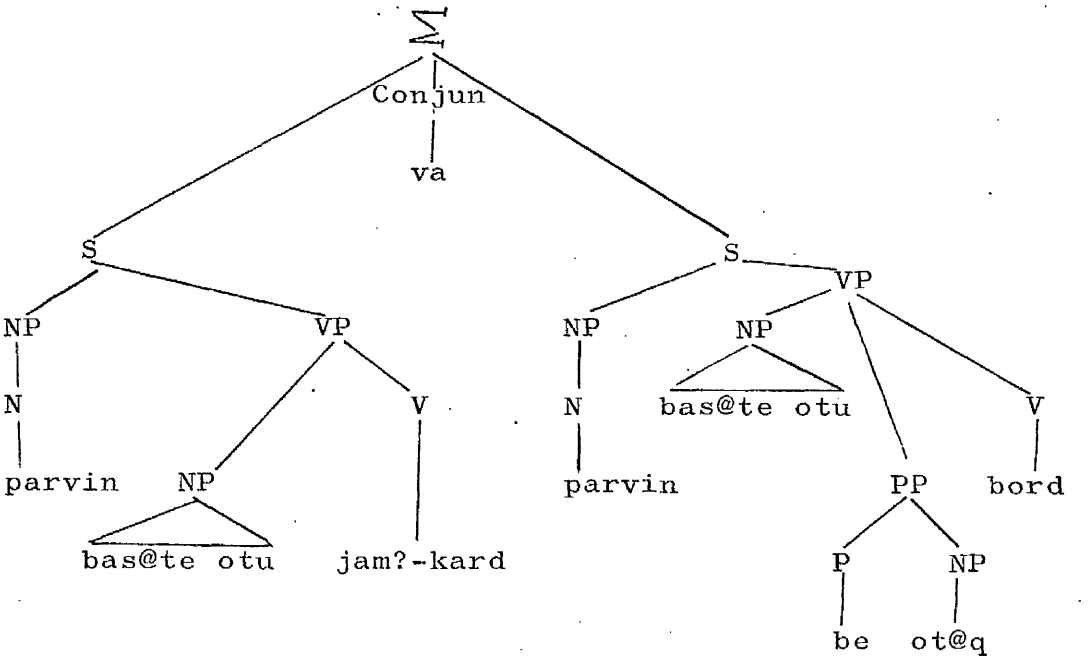
(Parvin) (implement) (iron) (pack-did)

(b) parvin bas@te otu r@ jam?-kard

(and)(that) (to)(room) (took)

va @n r@ be ot@q bord = Parvin packed up the ironing implements and took them to the room.

The underlying structure for both sentences would roughly be:



P.M.20.

11: NP≻PP ⟹ Pro

If the identical NP in the embedded sentence and in the second conjoined sentence is dominated by a prepositional phrase, we cannot omit it, and we have to pronominalize it. Thus 50(a) is grammatical :

(man) (learned) (that) (with)(him)

50(a). marde d@ne&mandi ke b@ u

(familiar-you-are)(came)

@&en@?i @mad = The learned man with whom you are acquainted came.

Whereas 50(b) is deviant :

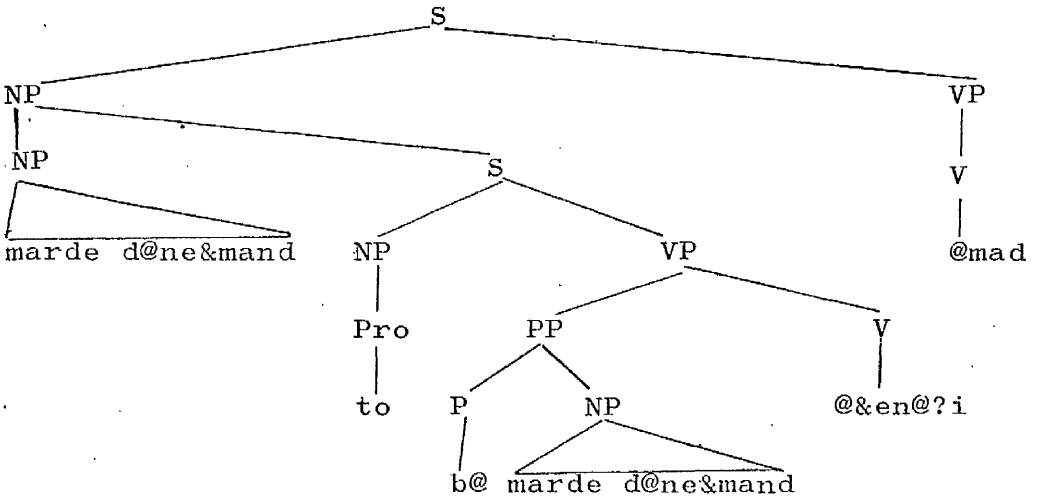
(man) (learned) (that)(with)(familiar-you-are)

50(b). *marde d@ne&mandi ke b@ @&en@?i

(came)

@mad.

The underlying structure of 50(a) is shown by P.M.21.



P.M.21.

12: NP $\Longrightarrow$ Ø

Condition: embedded sentence is equational.

The rule above shows that if the embedded sentence is an equational sentence, we should omit the identical NP in the embedded sentence. Thus we can have:

(I) (with)(car) (that) (comfortable) (was)
51(a): man b@ m@&ini ke r@hat bud
(came-I)
@madam = I came in a car which was comfortable.

And 51(b) with pronominalized NP is deviant :

(I) (with) (car) (that)(it) (comfortable)
51(b):* man b@ m@&ini ke @n r@hat
(was) (came-I)
bud @madam

So far, we have discussed the rules involving pronominalization or omission of the identical noun-phrase in the deep structure. We have not given any explanation for those rules. The fact is that in most cases we cannot find an explanation which can be imposed upon the connected rules. In the case of NP's which are dominated by prepositional phrases, the reason why we have to pronominalize the identical noun-phrase is that we require an element on the surface structure on which to hang the preposition. So we have to have a pronoun on the surface structure of our sentence. One might argue that in the case of noun-phrases which are the

subjects of embedded sentences or of second conjoined sentences, and which we have to omit, the reason for this omission is the fact that the suffixes at the end of the verbs show to whom they refer, so far as the person is concerned, and thus we do not need to have the pronoun in the surface structure. But this is not a strong argument, because we have seen that in the case of conjoined sentences we sometimes have to pronominalize the noun-phrase although it is the subject of the verb.

Types of Pronouns

According to the different syntactic behaviours of pronouns, we can divide them into three categories:

1 Personal Pronouns.

2 Reflexive Pronouns.

3 Emphatic Pronouns.

1.- Personal Pronouns

In the previous section of this chapter, we discussed the syntactic behaviour of personal pronouns. Here, we are going to show the two different forms of personal pronouns i.e. bound forms and free forms. As their names suggest, free forms occur as independent words. Thus we can have:

(he) (came-he)
52: u @mad = He came.

(we) (came-we)
53: m@ @madim = We came.

(book) (to) (him)(gave-I)
54: ket@b r@ be u d@dam = I gave the book to him.

As the examples show, the place which the free form occupies in the surface structure is the same place as the one occupied by a noun-phrase. Compare 52, 53 and 54 with 55, 56 and 57 respectively.

(Parvin)(came-she)
55: parvin @mad = Parvin came.

(I)(and)(Parvin)(came-we)
56: man va parvin @madim = Parvin and I came.

(book) (to)(Parvin)(gave-I)
57: ket@b r@ be parvin d@dam = I gave the book to Parvin.

With bound forms of pronouns this is not so, i.e. they do not occupy the same place in the surface structure as the noun-phrases do. The bound forms are suffixed to verbs, prepositions and nouns. The bound forms can occur wherever the free forms can. There is only one exception, which is that the bound forms do not fill the place of the subject unless the subject is third person singular, and then only in certain tenses. So we can have @mada& (i) = {"he / "she came", but not *@madamam = "I came" or *@madiat = "you came". And also we can have rafte-buda& = {"he / "she had gone", with the past perfect tense. With the present tense, the bound form of the third person singular can occur with the subjunctive and also with the simple present indicative. So we can have 58 and 59:

(i) Or more appropriately: umade& (the colloquial version). It should be noted that this occurs mainly in the colloquial language.

(today)(comes-he)(i)
58: emruz miy@de& = he comes today.

(if) (today)(comes-he)(ii)
59: agar emruz biy@de& = If he comes today.

On the other hand, there are two syntactic environments in which the bound forms of the pronoun can occur, but the free forms cannot. The first is where the pronoun is in its possessive form and refers to the subject of the sentence. Thus the sentence 60 might be interpreted as "Hasan took his (own) book" or "Hasan took somebody else's book ".

(Hasan)(book-his) (took)
60: hasan ket@ba& r@ bard@&t = Hasan took his book.

But the counter example of 60 with the free form of the pronoun has only one interpretation. Therefore, the meaning of the sentence 61 would be "Hasan took somebody else's book". It does not mean "Hasan took his own book".

(Hasan)(book) (he) (took)
61: hasan ket@be u r@ bard@&t = Hasan[1] took his[2] book.

So, as we have shown by examples 60 and 61, the free form of the pronoun cannot refer to the subject of the sentence when it is in its possessive

---

(i) miy@de&, like miy@d, is a colloquial version of mi?@yad ="he comes" (or" is coming").
(ii)Both biy@d and biy@de& are colloquial versions of biy@yad(subjunctive for mi?@yad).

form.

The second syntactic environment in which the free forms cannot occur, whereas the bound forms can, is where the subject of the sentence is mentioned. So we can have 62 with the bound form of the pronoun (i.e. a&) attached to the verb:

(Ali)(came-he)
62: ali @mada& (i) = Ali came.

But we cannot have 63 in which the free form of the pronoun occurs:

(Ali)(he)(came-he)
63:* ali u @mad = Ali came.

Therefore, the rules of the grammar should be formulated in such a way as to allow it to produce such sentences as 62, or rafte-buda& (ii) = "{he / she} had gone" and block strings like 63. Our grammar should also contain a T rule which determines the place of the bound forms. The place of the free forms does not change from deep to surface structure, i.e. it occurs in the place of NP which occurs before the verb in its subject, direct object and indirect object function, and it occurs after the noun in its possessive function. Thus we have:

(i) Or more usually : ali umade& (colloquial version).
(ii) Or more usually : rafte-bude& (colloquial version).

(he) (came-he)
64: u @mad = He came.

(to) (he) (said-I)
65: be u goftam = I told him.

(he) (saw-I)
66: u r@ didam = I saw him.

(book) (he)
67: ket@be u = his book.

But the bound form of the pronoun attaches itself to the end of the verbs, noun-phrases and prepositions. Moreover, when the verb is compound (e.g. P + V or N + V) it attaches itself to the end of the preposition or noun which forms the first component of the compound verb. Sometimes it can attach itself to the end of the verb, and sometimes it cannot. In those sentences where it can, the sentence would sound more literary. Thus we can have, from the infinitive bard@&tan = "to take" (composed with bar which is a preposition and d@&tan which is a verb), the sentences 68 and 69 :

(take-it)
68: bara&d@r = Take it.

(take-it)
69: bard@ra& = Take it.

And also from the infinitive dust-d@&tan = "to like" (composed of dust which is a noun and d@&tan

which is a verb) we can have 70 and 71 :

(like-it-you)
70: dusta&-d@ri = You like {her / him / it}.

(like-you-it)
71: dust-d@ria& = You like {her / him / it}.

As we have already said, 69 and 71 are only found in poetry or in high literary prose and, of course, in the speech of those who imitate those forms. But from the infinitive x@b-bordan = "to fall asleep", we can have 72 but not 73 :

(sleep-him-took)
72: x@ba&-bord = He fell asleep.

(sleep-took-him)
73: *x@b-borda&

To cope with this state of affairs, we need to have on the underlying structure the feature [+free] associated with the pronoun. And according to its presence or absence we know whether or not we have to apply the T rule which is to be applied to the bound forms. And also we require a feature [± compound] associated with the verb so that we know whether the bound form has to be attached to the end of the verb or to the end of its first component (i.e. preposition or noun).

We suggest one T rule which determines the place of the bound forms, and that is T bound form attachment:

T bound form attachment:

$$SD = \underset{[\pm \text{ free}]}{\text{Pro}} \quad - \quad V$$

$$SC = \begin{matrix} 1 & - & 2 \\ 2 & + & 1 \end{matrix} \Longrightarrow \text{oblig}$$

Condition: 1 = [- free]

The rule shows that we have to change the place of the pronoun if it has the feature [- free] associated with it. We also suggest another T rule to cope with the place of the bound forms when the verb is compound:

T bound form attachment (compound):

$$SD = \underset{[\pm \text{free}]}{\text{Pro}} \quad -\text{Com.V}\left[\left\{ \begin{matrix} \text{N} \\ \text{Pre} \end{matrix} \right\} \quad - \quad V \right]_{\text{Com.V}}$$

$$SC = \begin{matrix} 1 & - & 2 & - & 3 \\ 2 & + & 1 & - & 3 \end{matrix} \Longrightarrow \text{oblig}$$

Condition: 1 = [- free].

The rule shows that when the feature [- free] is associated with a pronoun and the verb is compound, we have to attach the pronoun to the end of the preposition or the noun which is the first element of the compound verb.

We have said before that if the second identical NP is in its possessive case and it refers to the subject of the sentence, we have to replace it by the bound form of the pronoun, and we cannot replace it by the free form (P.166). So we need to add another T rule to the previous rules of pronominalization and we call it T bound form attachment in possessive case:

T bound form attachment in Poss.case:

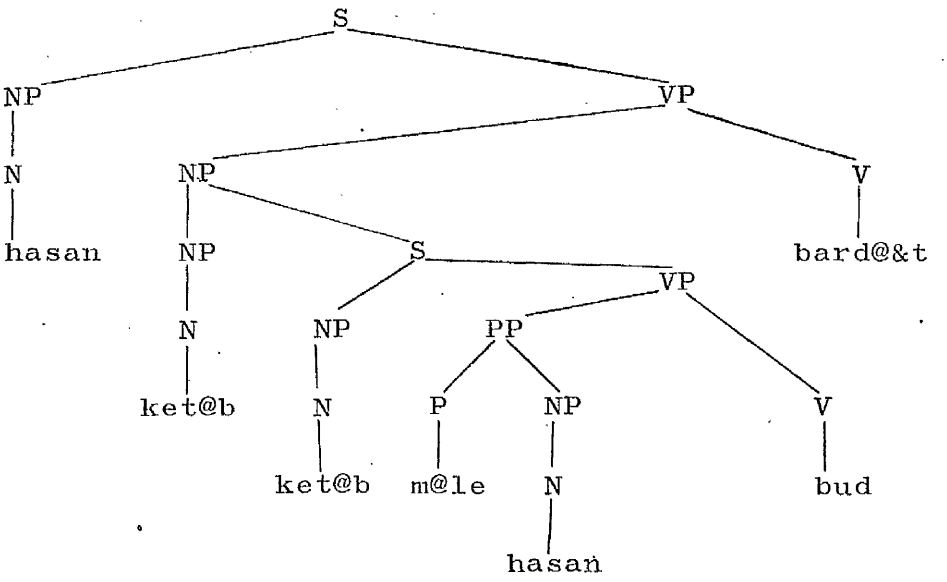
$$SD = X - NP_1 - NP_2 + \underline{e} - NP_3 - Y$$
$$1 - 2 - 3 - 4 - 5 - 6$$

$$SC = 1 - 2 - 3 + \emptyset + Pro - 6 \Longrightarrow \text{oblig}$$

Condition: $NP_3 = NP_1$ [- free] and is coreferential to it.

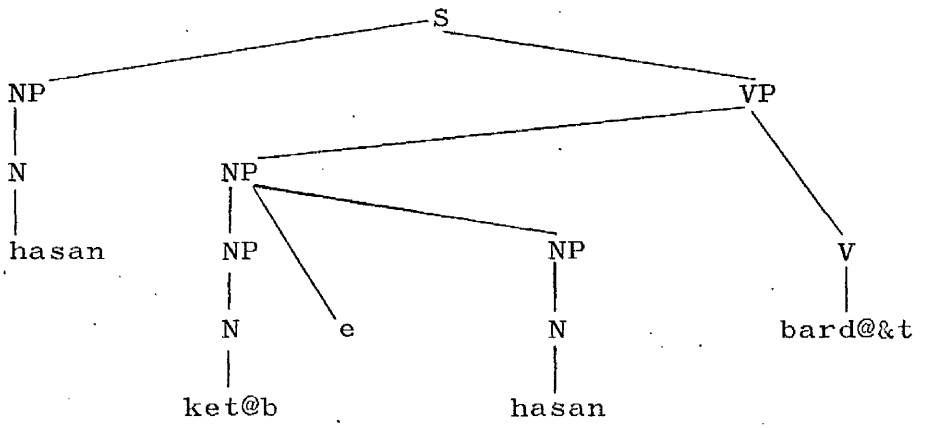
The rule shows that we have to write NP as the bound form of the pronoun if it is in the possessive case and if it refers to the subject of the sentence. It also shows that e, which is attached to the end of NP_2 and which shows that NP_3 is in its possessive case, should be omitted. Here is an example: The deep structure of sentence 74 is shown by P.M.22.

	(Hasan)(book-his)		(took)		
74:	hasan	ket@ba&	r@	bard@&t	= Hasan took his book.



P.M.22.

After applying T relative clause formation (p.66) and T noun-phrase formation (p.76), the tree would have the shape:



P.M.23.

Here we have to apply our suggested T rule (p.171) to change the second NP which is dominated by NP> VP to the bound form of the pronoun and omit the element e from the underlying structure.

2 - Reflexive Pronouns

The basic reflexive pronoun is xod in Persian. It appears in the surface structure in the place of the indirect or direct object when in the deep structure the object is identical and coreferential to the subject of the simplex sentence. Within the complex sentence, too, it might be identical and coreferential to the direct or indirect object. 75 and 76 show the occurrence of the reflexive pronoun within the simplex and complex sentence, respectively:

(Parvin)(in) (mirror) (self) (saw)
75: parvin dar @yene xod r@ did = Parvin saw herself in the mirror.

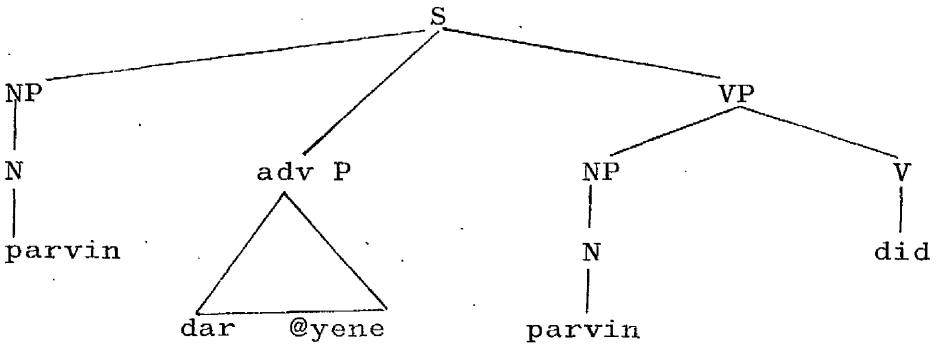
(Parvin)(that)(self) (had made up) (came)
76: parvin ke xod r@ @r@ste-bud @mad = Parvin, who had made herself up, came.

In 75 and 76, xod is identical and coreferential to the subject of the matrix sentence. In 77 and 78, it is identical and coreferential to the indirect and direct objects of the sentences respectively.

(Ali)(to)(Parvin)(that) (self) (had made up)
77: ali be parvin ke xod r@ @r@ste-bud
(hello-did)
sal@m-kard = Ali said "Hello" to Parvin who had made herself up.

(Ali) (Parvin) (saw)(that)(with) (self)
78: ali parvin r@ did ke b@ xod
(was speaking)
harf-mizad = Ali saw Parvin who was speaking to herself.

As the native speakers of Persian would interpret 75 as (Parvin)(in) (mirror)(Parvin) (saw)
parvin dar @yene parvin r@ did =
"Parvin saw Parvin in the mirror", the deep structure of the sentence would be:



P.M.24.

We need a T rule to convert the identical NP to the reflexive pronoun:

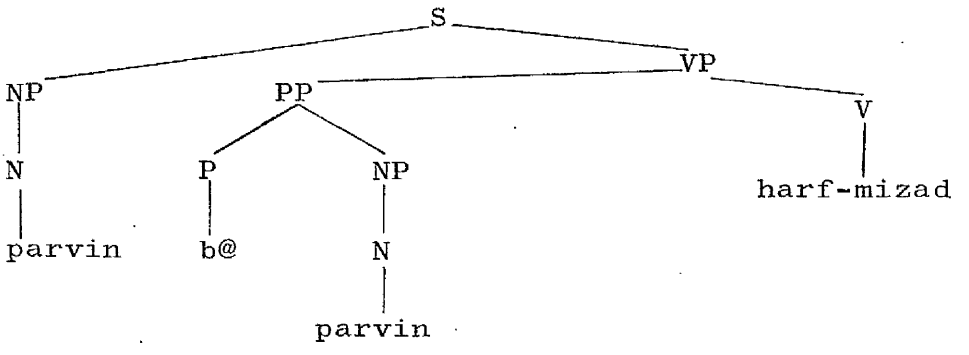
T reflexive:

SD = X - NP - Y - NP - Z
1 - 2 - 3 - 4 - 5
⟹ oblig
SC = 1 - 2 - 3 - xod - 5
Condition: 2 and 4 are identical and coreferential.

This rule is obligatory and for P.M.24 , Y would be an adverbial phrase (i.e. dar @yene). For sentences such as 79, Y would be b@ ="with".

(Parvin) (with) (self) (was speaking)
79: parvin b@ xod harf-mizad = Parvin was speaking to herself.

Here is the deep structure of 79:



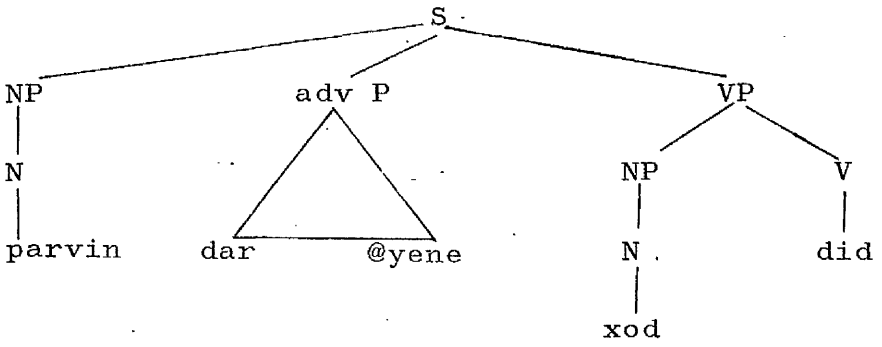
P.M.25.

The reflexive pronoun might also occur in a sentence with the bound form of the pronoun attached to the end of it. Therefore, we should produce another T rule to allow the grammar to generate such sentences as 80 in which the bound form of the pronoun is attached to the end of the reflexive.

(Parvin)(in) (mirror)(herself) (saw)
80: parvin dar @yene xoda& r@ did =
Parvin saw herself in the mirror.

80 is semantically identical to 75. For generating

80, we suggest an optional T rule which we call T reflexive bound form attachment. This rule should be applied after T reflexive pronoun i.e. it should be applied to tree diagrams such as P.M.26.



P.M.26.

Here is T reflexive bound form attachment:

T reflexive bound form attachment:

SD = X - NP - Y - xod - Z

1 - 2 - 3 - 4 - 5

⟹ optional

SC = 1 - 2 - 3 - 4+Pro - 5
[-free]

The rule shows that we can attach the bound form of the pronoun to the end of xod. The pronoun should be the bound form, otherwise it would refer to someone other than parvin, and xod would be emphatic not reflexive(i).

(i) We will later discuss the emphatic pronoun and its syntactic behaviour which differs from that of the reflexive in spite of its apparent identity.

Consider the following examples:

(Parvin)(in) (mirror) (self) (he) (saw)
81: parvin dar @yene xode u r@ did =
Parvin saw him (himself) in the mirror.(i)

In 81, xod, being emphatic, does not refer to Parvin, whereas 80 can mean (Parvin)(in)(mirror) parvin dar @yene (Parvin) (saw) parvin r@ did = "Parvin saw Parvin in the mirror" or parvin dar @yene x r@ did = "Parvin saw x in the mirror".

In this way, 81 has one meaning whereas 80 has two meanings associated with it. It should be noted that the occurrence of the adverbial phrase (i.e. (in)(mirror) dar @yene = "in the mirror") makes the possibility of the second interpretation of 80 (i.e. (Parvin)(he) parvin u (in)(mirror)(saw) r@ dar @yene did = "Parvin saw him in the mirror") very weak, but this possibility still exists. Here is another example to clarify the point:

(Parvin)(to) (herself) (himself)(had said) (that)(should)
82: parvin be xoda& gofte-bud ke b@yad
(go-he or she)
beravad

82 can be interpreted as 83(a) or 83(b):

(Parvin)(to)(Parvin)(had said) (that)
83: (a) parvin be parvin gofte-bud ke

(i) We will show the deep structure of this sentence in the next section where we deal with emphatic pronouns.

(should) (go)
b@yad beravad = Parvin had told Parvin that she should go.

(Parvin)(to) (self) (x) (had said) (that)
(b)parvin be xode x gofte-bud ke
(should) (go)
b@yad beravad = It was x himself that Parvin had told he should go.

The counterpart of 82, however, with the free form of the pronoun is interpreted only in one way. So the sentence 84 has only one meaning.

(Parvin)(to)(self)(he) (had said) (that)(should)
84: parvin be xode u gofte-bud ke b@yad
(go)
beravad = Parvin had told x himself that he should go.

It is important to make it clear that the obligatory T rule which we have given for reflexive pronouns can be applied both in complex and in simplex sentences. So, the constraint which Lees and Klima[(i)] have imposed upon their proposed T rule for reflexive pronouns (i.e. that two identical and coreferential NP's should be within simplex sentences) has no effect in Persian, provided that we note that the processes of relativization and pronominalization take place before the process of reflexivization. J.A. Moyne in his article "Reflexive and Emphatic"[(ii)]

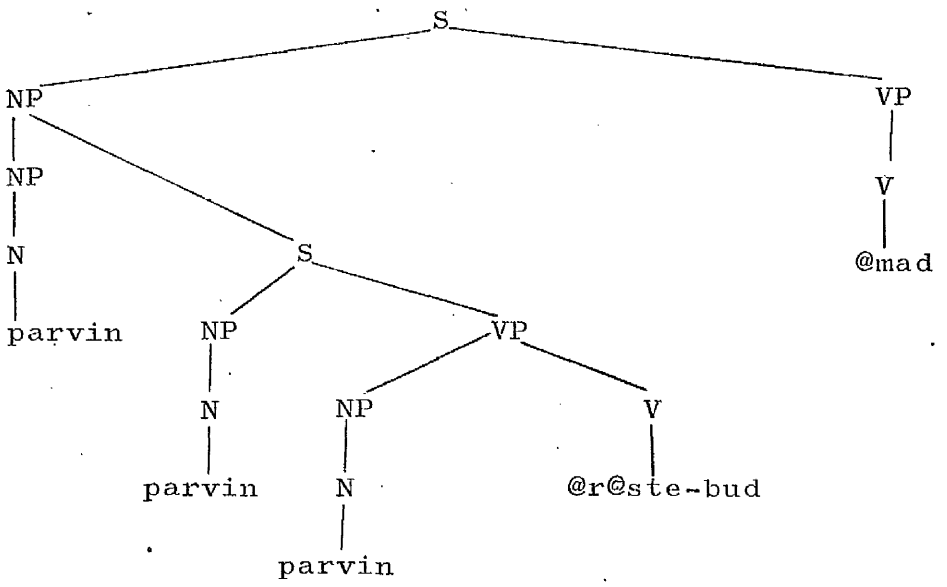
(i) Language, Vol. 39 (1963), pp. 17-28 .

(ii) Language, Vol. 47(1971), pp. 141-163.

has imposed the same restriction as Lees and Klima did on the rule he has given for the reflexive pronoun in Persian . The fact is that once we state the order of T relative clause formation and T reflexive pronoun, then it is not necessary to impose either Lees and Klima's constraints for the reflexive pronoun upon our T reflexive or the second restriction which J.A.Moyne has imposed upon his reflexive rule (in the same article). The first restriction is imposed on two identical and coreferential NP's. The one which is not reflexivized should be the subject of the sentence and the one which undergoes the process of reflexivization should be the direct or indirect object of the simplex sentence. We now show that we need not impose the constraints suggested by Moyne, provided that in the complex sentence we apply T relative clause formation before T reflexive. Consider this example:

(Parvin)(that)(self) (had made up) (came)
85: parvin ke xod r@ @r@ste-bud @mad= Parvin ,
who had made herself presentable, came.

The deep structure of 85 would roughly be:



P.M.27.

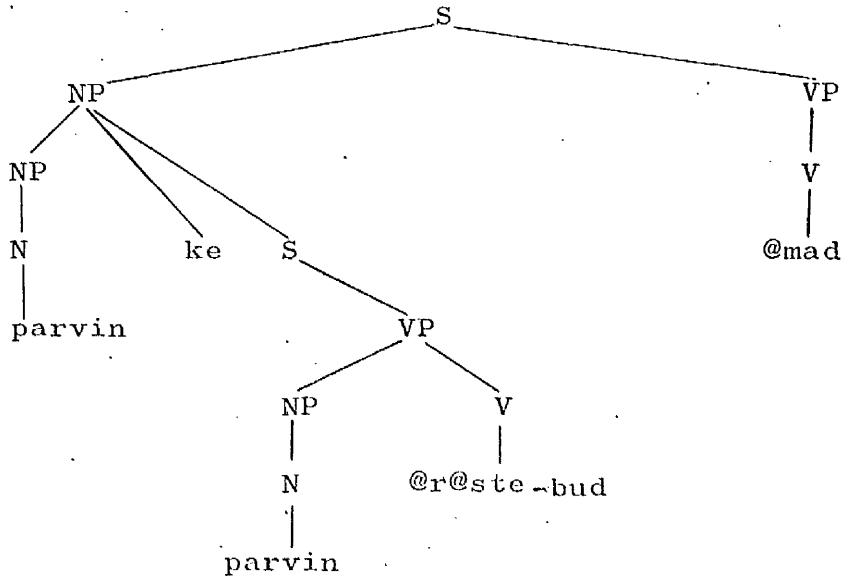
As we have said before, we first apply T relative clause formation and T pronominalization to convert the string above to the string 86:

(Parvin) (that)(Parvin) (had made up)(came)

86: parvin ke parvin @r@ste-bud @mad

= Parvin, who had made Parvin presentable, came.

And the tree diagram associated with it would be:



P.M.28.

Here we apply T reflexive to convert the string above to the string 87:

(Parvin)(that)(self) (had made up)
87: parvin ke xod @r@ste- bud
(came)
@mad

T objective marker would introduce the objective marker r@ after xod, and we come up with the actual surface structure of the sentence 85 (p.179).

As we have shown in the generation of 85 , we can apply T reflexive pronoun to the complex sentence provided that we apply T relative clause formation(restrictive) and T pronominalization before it.

The second restriction which Moyne imposes upon his reflexive rule is that NP should be the subject and NP_1(i.e. NP of embedded sentence) should be the direct object or indirect object of the sentence. This restriction is not true either within simplex sentences or in complex sentences. In complex sentences, if we apply T relative clause formation(restrictive)befor T reflexive, then T reflexive can be applied when NP is either a direct or an indirect object. Here is an example of a sentence in which the first identical NP is the direct object of the matrix sentence:

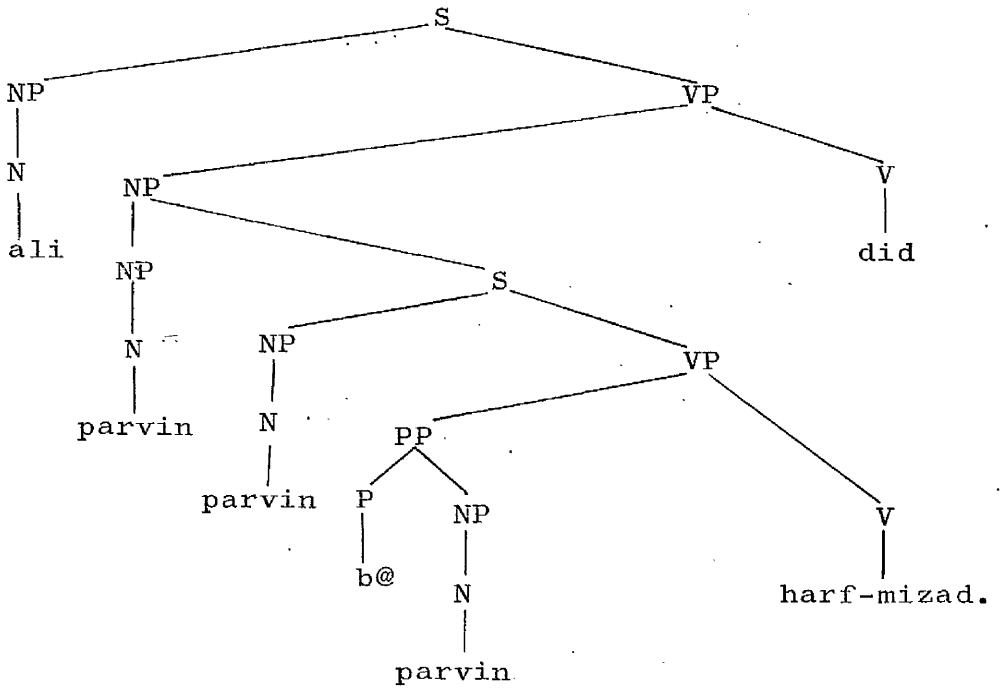
(Ali)(Parvin) (saw) (that)(with) (self)

88: ali parvin r@ did ke b@ xod

(was talking)

harf-mizad = Ali saw Parvin who was talking to herself.

The tree diagram associated with the deep structure of 88 would roughly be:



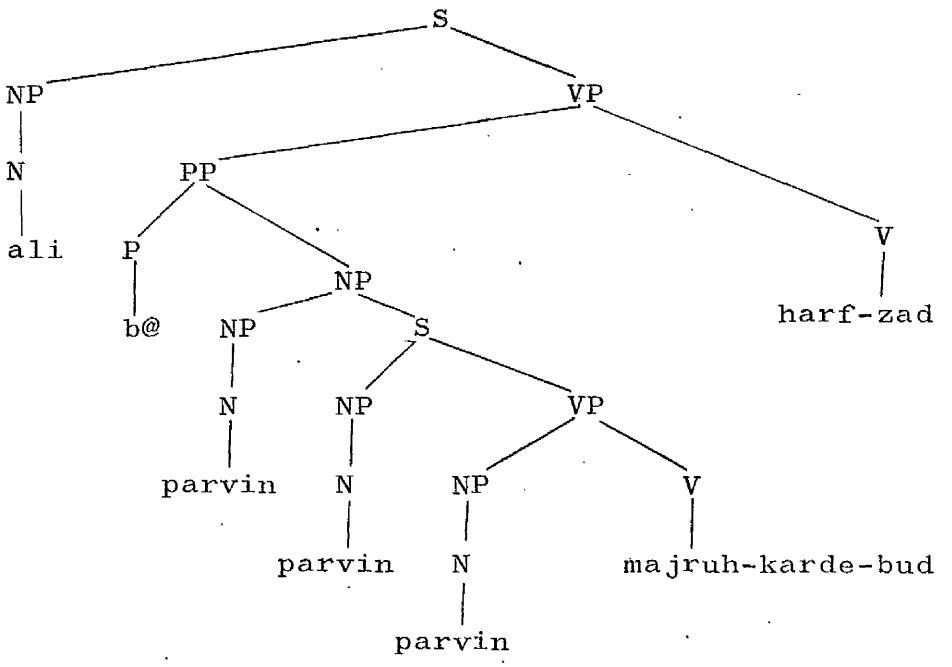
P.M.29.

Here we first apply T relative clause formation (p.66) to convert the string above to (Ali)(Parvin)(that) ali parvin ke (saw) did (with)(Parvin)(was talking) b@ parvin harf-mizad and then T reflexive converts this string to (Ali)(Parvin)(that) ali parvin ke (with)(self) (was talking)(saw) b@ xod harf-mizad did.

Here is an example in which two identical and coreferential NP's are indirect objects of the matrix sentence and direct objects of the embedded sentence:

(Ali)(with)(Parvin)(that)(self) (had wounded)
89: ali b@ parvin ke xod r@ majruh-karde-bud
(spoke)
harf-zad = Ali spoke to Parvin who had wounded herself.

The deep structure of 89 would roughly be:

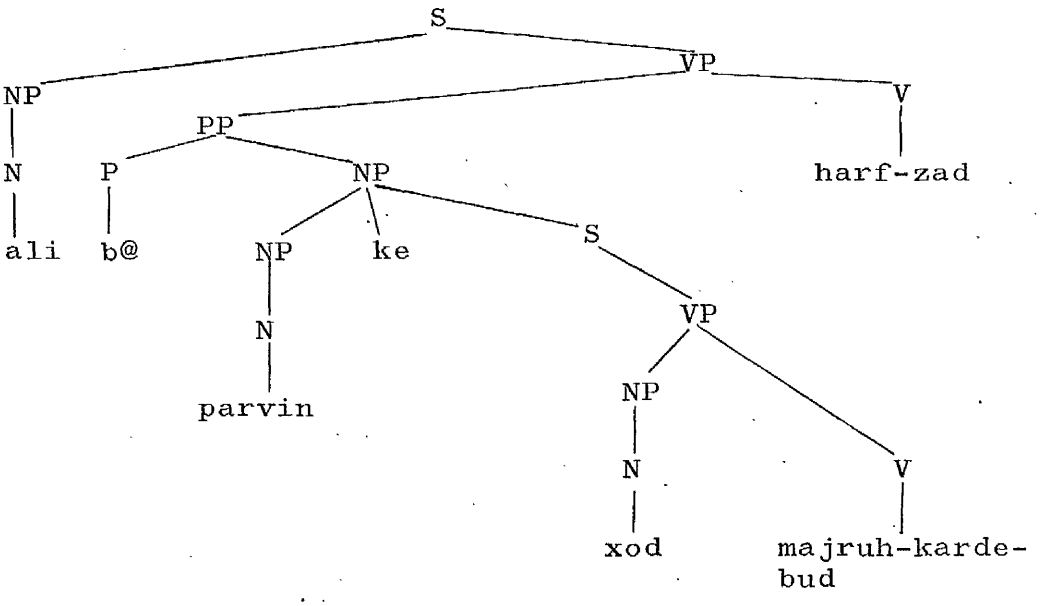


P.M.30.

First we apply T relative clause formation(p.66) and T pronominalization to convert the string above to

(Ali)(with)(Parvin) (that)(Parvin) (had wounded)
ali b@ parvin ke parvin majruh-karde-bud

(spoke)
harf-zad . And then we apply T reflexive to convert parvin of the embedded sentence to xod. P.M.31 shows the phrase marker associated with the resulting string:



P.M.31.

P.M.31 shows that the identical NP is omitted according to the rules of pronominalization which have been given in the chart (p.141).

In order to have a natural sequence of the elements in 89, we have to apply T objective marker to produce r@ after xod. Here according to T reflexive, (i.e. X - NP - Y - Z = X - NP - Y - xod - Z) X is ali b@, NP is parvin, Y is ke, and Z is the rest of the elements of the string. Examples 88 and 89 show that the process of reflexivization can take place within a complex sentence if identical NP of the

matrix sentence is the direct or the indirect object of the matrix sentence .

Within a simplex sentence, too, the process of reflexivization can take place if the identical NP is either direct or indirect object. Consider the following examples:

(I) (with)(myself)(alone) (leave)
90: man r@ b@ xodam tanh@ begoz@r = Leave me alone with myself.

(to) (I) (about) (myself)(say)
91: be man darb@reye xodam begu = Tell me about myself.

In (90), man =" I"is the direct object of the sentence (the subject of the sentence which is to = "you"is to be understood) and xodam ="myself", which is a reflexive pronoun, refers to man.

In (91), man is the indirect object of the sentence and xodam = "myself" refers to it. So, the second restriction (p.181) which Moyne imposed upon T reflexive is only true within simplex declarative sentences.

3 -Emphatic Pronouns

We have mentioned in the previous section that in spite of their superficial sameness, emphatic pronouns and reflexive pronouns are different in their syntactic behaviour. In the surface structure, an emphatic pronoun occurs: (a) In ez@fe construction, i.e. before the noun or pronoun which it emphasizes, and with a linking element between them (the reflexive pronoun does not occur in ez@fe construction);(b) after the noun or pronoun it emphasizes (in this position, it has also to have the bound form of the pronoun attached to the end of it); (c) combining with the bound forms of the pronoun accompanying it. Here are some examples:

92: (a) (self) (Parvin)(Hasan) (saw)
xode parvin hasan r@ did = { Parvin

(b) (Parvin)(herself)(Hasan) (saw)
parvin xoda& hasan r@ did = { herself saw

(c) (herself)(Hasan) (saw)
xoda& hasan r@ did = { Hasan.

(c) (herself)(Hasan) (saw)
xoda& hasan r@ did = { He himself / She herself saw Hasan.

93: (a) (self)(I) (dress) (bought-I)
xode man leb@s r@ xaridam = { I bought

(b) (I) (myself)(dress) (bought-I)
man xodam leb@s r@ xaridam = { the dress myself.

(c) (I)(himself) (saw-I)
man xoda& r@ didam = I saw him (It was he himself that I saw).

The meanings of the sentences 92(a) and 92(b) are the same. So are those of 93(a) and 93(b). In (a)'s,

the emphatic pronoun occurs in ez@fe construction, and in (b)s, it occurs after the noun or the pronoun which it emphasizes, and with the pronoun (i.e. a& = third person singular, and am = first person singular, respectively) suffixed to it. In (c)s, it occurs with the bound form of the pronoun attached to it.

It should be noted here that when the noun which is to be emphasized is NP>VP and not NP>S, we can use the emphatic pronoun in ez@fe construction i.e. before the emphasized noun, and with a linking element between them. Also, we cannot use it after the noun which we want emphasized. Thus we can have 94:

(self) (Parvin) (saw-I)
94: xode parvin r@ didam = I saw Parvin herself.

We cannot, however, have :

(Parvin)(herself) (saw-I)
95:* parvin xoda& r@ didam

Also we can have 96:

(with)(self) (Parvin) (spoke-I)
96: b@ xode parvin harf-zadam = I spoke to Parvin herself.

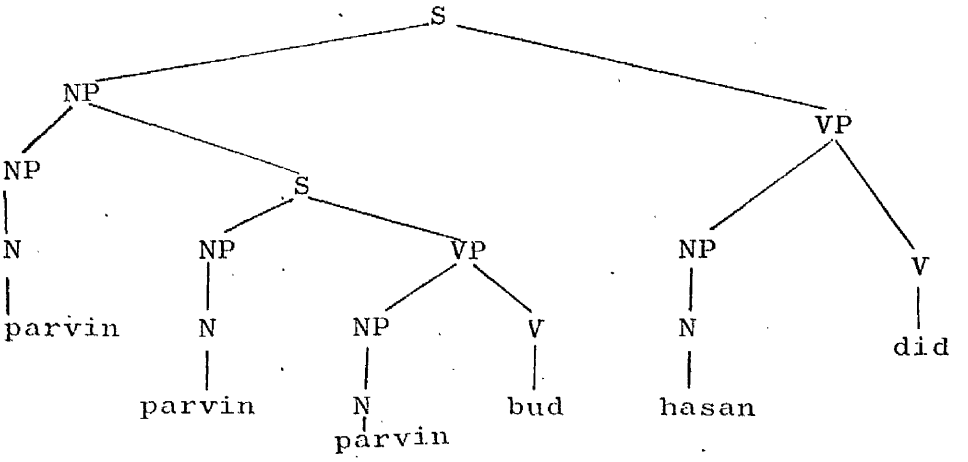
but not 97:

(Parvin) (with)(herself)(spoke-I)
97:* parvin b@ xoda& harf-zadam

Having in mind that both NP>VP and NP>S can be emphasized if an emphatic pronoun occurs with them in ez@fe construction, we prefer to take the emphatic pronoun in ez@fe construction as a basic pattern and derive the other patterns from it with optional T rules.

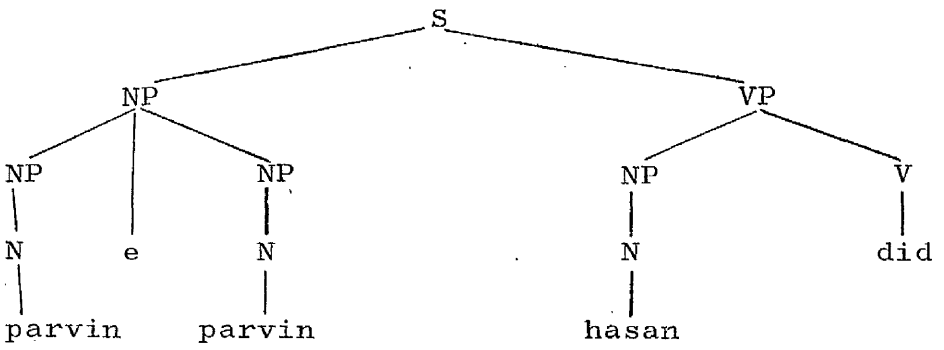
Reflexive pronouns and emphatic pronouns differ in their deep structures as well. Emphatic xod is not an element of deep structure. In the surface structure, it is substitued for a noun which is - for the sake of emphasis - repeated in the deep structure. In everyday speech, when we want to emphasize something we repeat it again and again. We suggest that this process of repetition should be shown in the deep structure for the noun which is to be emphasized in the surface structure. For instance, the deep structure of the sentence 98 would roughly be P.M.32 :

(self) (Parvin) (Hasan) (saw-she)
98: xode parvin hasan r@ did = Parvin herself saw Hasan.



P.M.32.

T relative clause formation(restrictive) and T pronominalization would change P.M.32 to (Parvin) parvin - (that) (Parvin) (was) (Hasan) (saw) ke - parvin - bud - hasan - did. And T noun-phrase formation No.1 converts the string above to (Parvin) (Parvin) (Hasan) (saw) parvine - parvin - hasan - did whose phrase marker is shown by P.M.33.



P.M.33.

At this stage, we have to apply T xod formation which is an obligatory rule. And this rule converts the first NP to xod:

T xod formation:

SD = X - NP + e - NP - Y

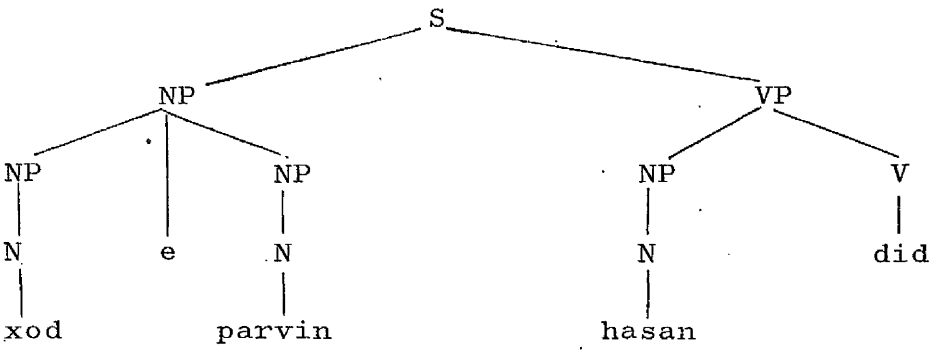
1 - 2 + 3 - 4 - 5

⟹ oblig

SC = 1 - xod + 3 - 4 - 5

Condition: 2 and 4 identical and coreferential.

The condition imposed upon the rule shows that it cannot be applied unless the two NP's are identical and coreferential. After applying T xod formation, the resulting string would be (self) (Parvin) (Hasan) xode - parvin - hasan (saw) did and the phrase marker associated with it would be:



P.M.34.

We only have to apply T objective marker in order to come up with the actual surface structure of 98 .

Notice that we only have to add one T rule (i.e. T xod formation) to the previous T rules in order to generate the sentence with the emphatic pronoun. We mentioned before that the emphatic pronoun might occur with the noun it emphasizes in an NP construction with the ez@fe marker between them and it can also occur after the noun with the bound form of the pronoun attached to it. So 98 can be paraphrased as 99 :

(Parvin) (herself)(Hasan) (saw)

99: parvin xoda& hasan r@ did = Parvin saw Hasan herself.

We have to apply an optional T rule to P.M.26 in order to produce 99 :

T xod changing position:

SD = X - N_1 + e - N_2 - Y

1 - 2 + 3 - 4 - 5

$\Longrightarrow$ optional

SC = 1 - 4 + Ø - 2 $+\text{Pro}_{[-\text{free}]}$ - 5

Condition: NP > S dominates 4.

The optional T rule above omits the linking element e and changes the place of N_1 and N_2, which are xod and the emphasized noun respectively, and also attaches the bound form of the pronoun to the end of xod. The condition imposed upon T xod changing position prevents the grammar from generating such strings as 100 which are not grammatical.

(Parvin)(herself) (saw-I)

100:* parvin xoda& r@ didam = I saw Parvin herself.

Up to now, we have discussed the emphatic pronoun when it is accompanied by a noun or by the free forms of the pronoun. The emphatic pronoun, however, as we mentioned before, can occur with the bound form of a pronoun attached to the end of it and without any

noun or pronoun accompanying it. 101 shows the emphatic pronoun with bound forms of the pronoun:

101: (a) xodam goftam = I myself said.
(b) xodat gofti = You yourself said.
(c) xoda& goft = He himself said.
(d) xodem@n goftim = We ourselves said.
(e) xoda& r@ didam = It was he himself I saw.

The occurrence of the emphatic pronoun by itself and without the bound forms of the pronoun can be seen in old style. Rarely, it may also be observed in the language of today. 102 shows the occurrence of the emphatic form by itself:

(self)(to) (he) (said-I)(that)(come)
102: xod be u goftam ke biy@ = I myself told him to come.

Notice that we can have the reflexive pronoun xod without bound forms and, for instance, 103 is quite normal.

(to) (self) (said-I)
103: be xod goftam = I said to myself.

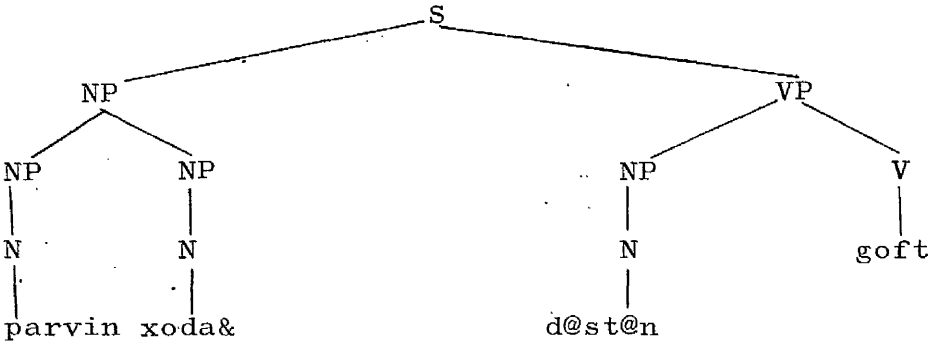
From what has been said above, it is clear that we have to add an optional T rule to the rules for emphatic pronouns to make them complete. This rule

which we call "emphasized noun reduction" should be applied to the output of the last optional T rule which we proposed on p.191 and which generates such sentences as 104:

	(Parvin)	(herself)	(story)		(said)
104:	parvin	xoda&	d@st@n	r@	goft

= Parvin herself told the story.

The tree diagram associated with 104 would be:



P.M.35.

Our suggested T rule would omit the first NP from P.M.35:

T emphasized noun reduction:

$$SD = X - N_1 - N_2 - Y$$
$$1 - 2 - 3 - 4$$

$\Longrightarrow$ optional

$$SC = 1 - \emptyset - 3 - 4$$

Condition: N_2 is xoda&

By applying the T rule above, we come up to the string (himself)(story) (said)
xoda& - d@st@n - goft. At this stage, T objective marker should be applied and it produces r@ after d@st@n ="story".

List of Transformational Rules introduced in Chapter Three

T Pronominalization :

SD = X - NP - Y - NP - Z
1 - 2 - 3 - 4 - 5

SC = 1 - 2 - 3 - $\begin{cases} \emptyset \\ \text{pronoun} \end{cases}$ - 5

⟹ oblig according to the rules of the connected chart .

Condition : (a) 2 and 4 are identical and coreferential .

(b) 2 and 4 are dominated by different sentences.

T bound form attachment :

SD = $\begin{matrix} \text{Pro} \\ [\pm \text{ free}] \\ 1 \end{matrix}$ - V
2

SC = 2 + 1

⟹ Oblig

Condition : 1 = [- free]

T bound form attachment (compound) :

SD = $\begin{matrix} \text{Pro} \\ [\pm \text{ free}] \\ 1 \end{matrix}$ - Com.V $\left[\begin{cases} \text{N} \\ \text{Pre} \end{cases} \right.$ - $\left. \text{V} \right]_{\text{Com.V}}$
2 3

SC = 2 + 1 - 3

⟹ oblig

Condition : 1 = [- free]

T bound form attachment in the possessive case :

SD = X - NP_1 - NP_2 + $\underline{e}$ - NP_3 - Y
1 - 2 - 3 + 4 - 5 - 6

SC = 1 - 2 - 3 + $\emptyset$ - $\begin{matrix} \text{Pro} \\ [\text{- free}] \end{matrix}$ - 6

⟹ oblig

Conditionn : NP_1 and NP_3 are identical and coreferential.

T reflexive :

SD = X - NP - Y - NP - Z

1 - 2 - 3 - 4 - 5

⟹ oblig

SC = 1 - 2 - 3 - xod - 5

Condition : 2 and 4 are identical and coreferential .

T reflexive bound form attachment :

SD = X - NP - Y - xod - Z

1 - 2 - 3 - 4 - 5

⟹ optional

SC = 1 - 2 - 3 - 4 + Pro - 5

[-free]

T xod formation :

SD = X - NP + e - NP - Y

1 - 2 + 3 - 4 - 5

⟹ oblig

SC = 1 - xod + 3 - 4 - 5

Condition : 2 and 4 are identical and coreferential .

T xod changing position :

SD = X - N_1 + e - N_2 - Y

1 - 2 + 3 - 4 - 5

⟹ optional

SC = 1 - 4 + Ø - 2 + Pro - 5

[-free]

Condition : NP > S dominates 4 .

T emphasized noun reduction :

SD = X- N_1 - N_2 - Y

1- 2 - 3 - 4

⟹ optional

SC = 1- Ø - 3 - 4

Condition : N_2 = xoda& .

CHAPTER FOUR

Adjectives

While discussing the composition of NP, we illustrated (p.61) that NP, among other things, might consist of N + e + adj. or N + e + N. e.g.:

(student) (good) (came)
1: &@gerde xub @mad = The good student came.

(student)(school)(came)
2: &@gerde madrese @mad = The {schoolboy / schoolgirl} came.

Although the words xub = "good" and madrese = "shool" occupy the same place in 1 and 2 respectively, we regard them as members of two different categories because there are other syntactic environments in which one of them can occur and the other cannot. Consider the following examples:

(good)(large) (is)
3:* xub bozorg ast =*Good is large.

(school) (large)(is)
4: madrese bozorg ast = The school is large.

(bold)(to) (I) (said)(that)(come)
5:* &oj@? be man goft ke biy@ =*Bold told me to come.

(student)(to)(I)(said)(that)(come)
6: &@gerd be man goft ke biy@ = The pupil

told me to come.

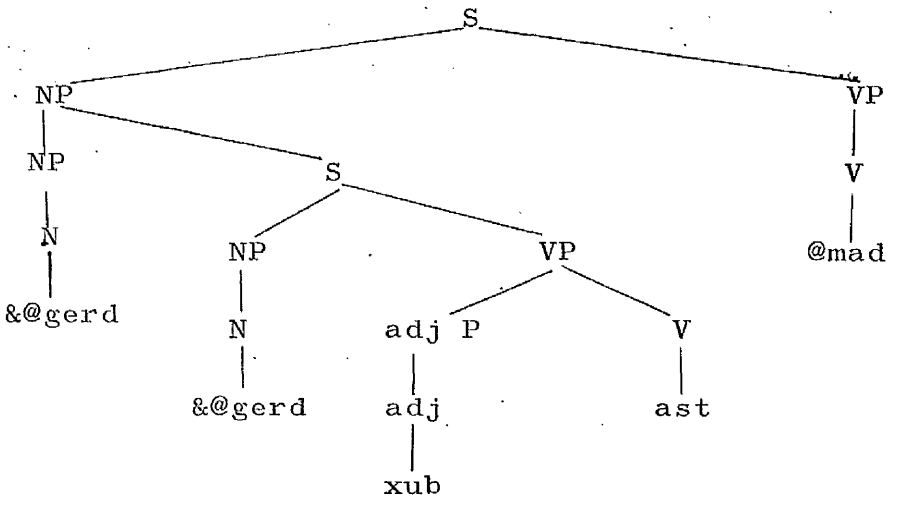
As examples 3 and 5 show, xub = "good" and &oj@? = "bold" cannot occupy the place of the subject by themselves, whereas madrese = "school" and &@gerd = "pupil" have occupied the place of the subject in 4 and 6 respectively.

Another difference between noun and adjective in surface structure is that a noun (like madrese = "school") can stand as the head of NP construction, whereas an adjective (like xub = "good") cannot. Consider the following examples:

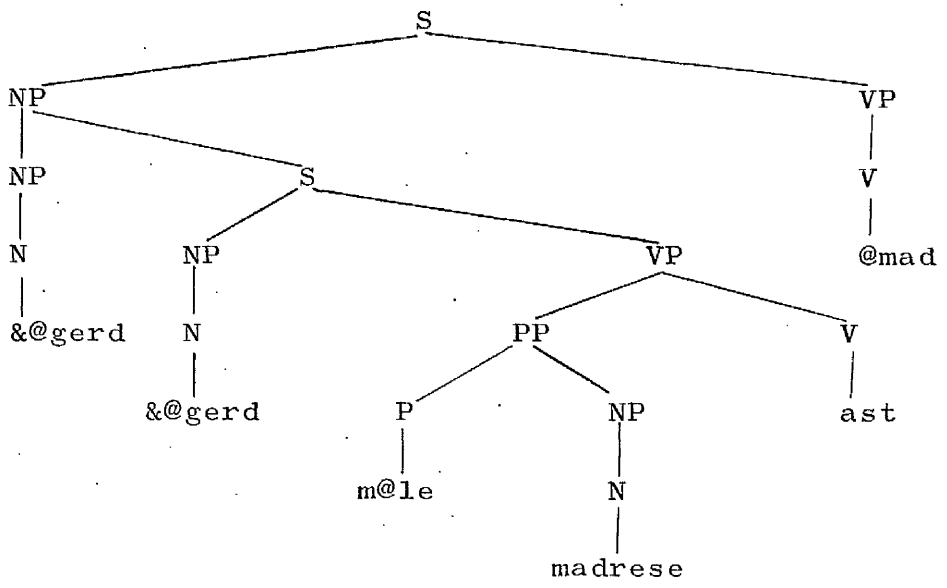
(good)(school)
7:* xube madrese = * good of school.

(school) (good)
8: madreseye xub = good school.

As the examples show, xub cannot stand as the head of NP construction whereas &@gerd can. Having these two differences in mind, we can conclude that madrese = "school" and xub = "good" are members of different categories and, therefore, sentneces like 1 and 2 have two different deep structures in spite of their similarity in the surface structure. The deep structures of 1 and 2 are shown by P.M.1 and P.M.2 respectively.



P.M.1.



P.M.2.

We have discussed these two deep structures in Chapter 1 and justified them on semantic grounds based on what is understood by native speakers of Persian from sentences like

(student)(good)(came)
&@gerde xub @mad

="The good student came" and (student)(school)(came)
&@gerde madrese @mad
="The {schoolboy / schoolgirl} came".

There is one point which needs clarification here. This is the fact that under certain conditions, an adjective can behave as a noun; that is to say, it can appear as the head of NP construction in ez@fe construction with other nouns, and also it can behave as the subject of a sentence. Consider the following examples:

(good-pl.)(came-they)
9: xub@n @madand = The good ones came.

(kind-a) (came)
10: mehrab@ni @mad = A kind person came.

(that)(kind) (came)
11: @n mehrab@n @mad = That kind person came.

As the example 9 shows, the adjective xub in its plural form behaves like a noun and is the subject of the sentence. In example 10 , the adjective mehrab@n = "kind" has an indefinite ending (i.e.i) attached to the end of it, i.e. it behaves like a noun and is the subject of the sentence. And in 11 , the adjective mehrab@n = "kind" is accompanied by the determiner @n = "that" (we have discussed determiners in chapter 5). The native speakers of Persian interpret 9 as 12(a) or 12(b)

or in some other way according to the context in which the sentence is uttered.

(people) (that) (good) (were) (came)
12: (a) mardomi ke xub budand @madand

= The people who were good came.

(girls) (that) (pretty) (were) (came)
(b) doxtar@ni ke xubru budand @madand

= The girls who were pretty came.

Also the native speakers of Persian interpret 10 and 11 as 13(a) or 13(b) and 14(a) or 14(b) respectively:

(person) (that) (kind) (was) (came)
13: (a) kasi ke mehrab@n bud @mad

= A person who was kind came.

(b) {doxtari / zani} ke mehrab@n bud @mad = A {girl / woman} who was kind came.

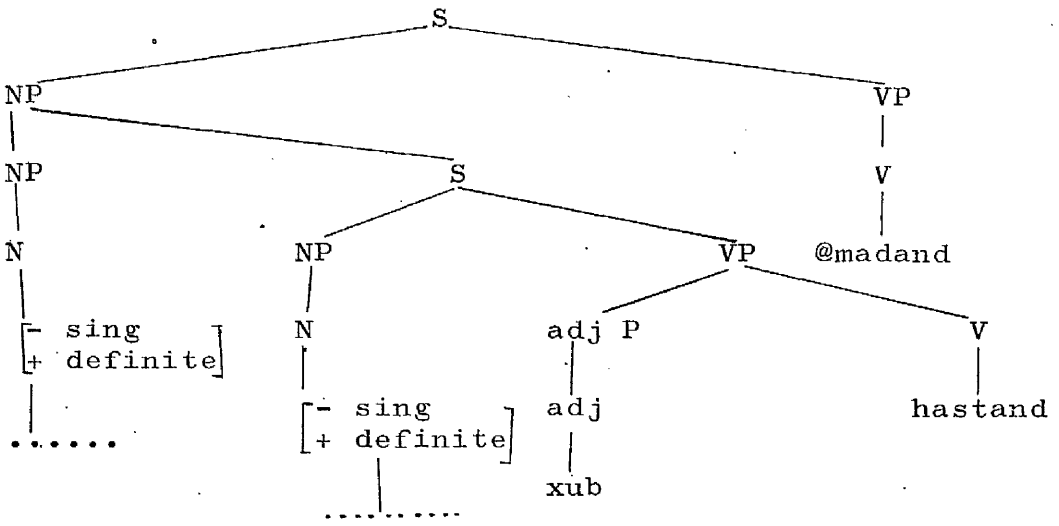
(that) (person) (that) (kind) (was) (came)
14: (a) @n kasi ke mehrab@n bud @mad

= The person who was kind came.

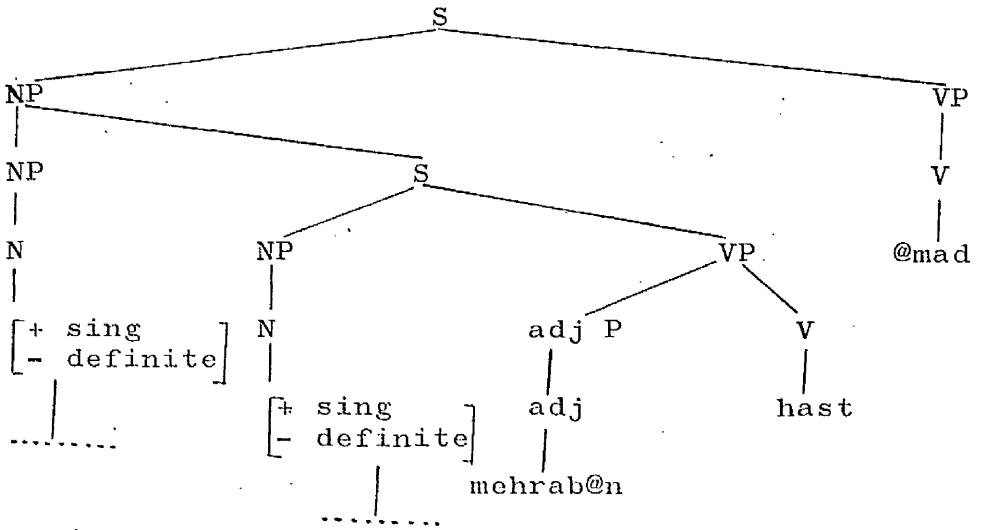
(b) @n (that) {(girl) / (woman)} {zani / doxtari} ke mehrab@n bud @mad = The {girl / woman} who was kind came.

Therefore, we conclude that in the deep structures of 9, 10 and 11, there is a head noun which is omitted from the surface structure. In the case of 9, the feature [+ plural] is associated with the

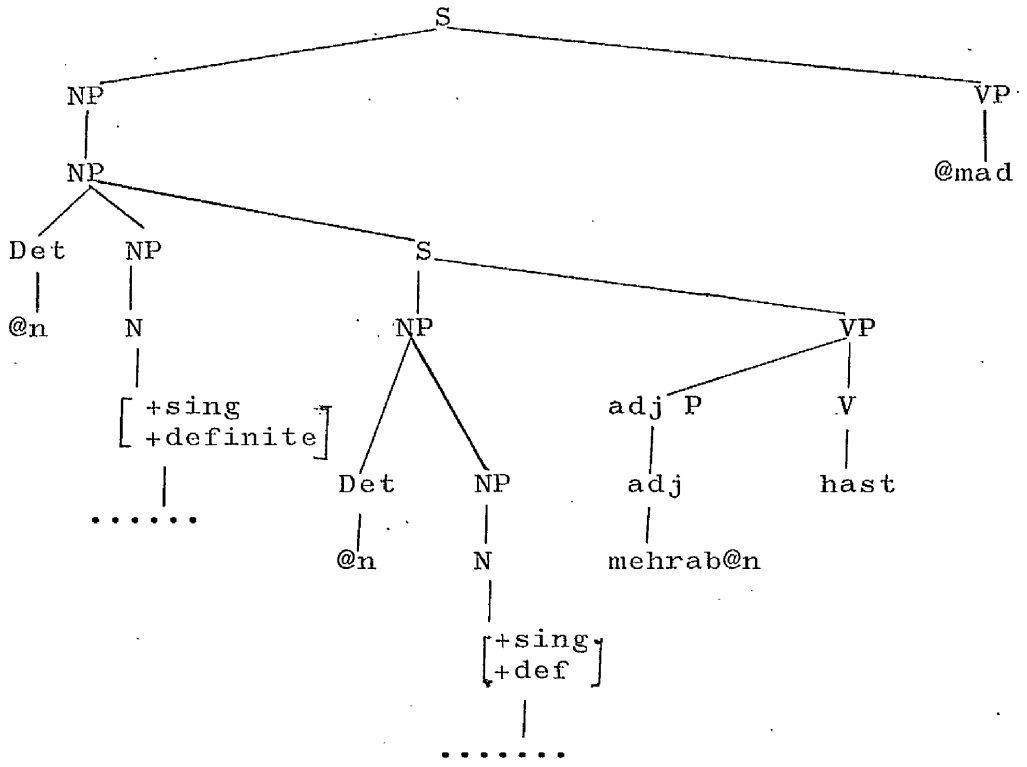
deleted head noun. In the case of 10 , the feature [- definite] is associated with the head of the deleted noun. And in the case of 11 , a determiner accompanies the head noun. To illustrate this state of affairs, we draw up the phrase markers which are associated with the deep structures of sentences 9 , 10 and 11 :



P.M.3.



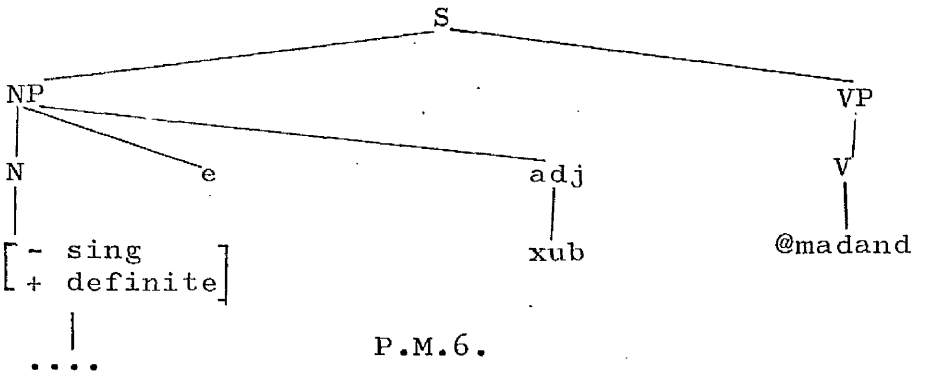
P.M.4.



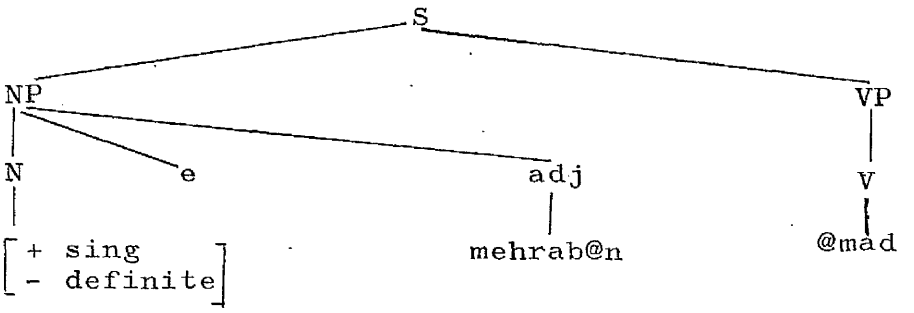
P.M.5.

P.M.3, P.M.4 and P.M.5 illustrate the deep structures of three kinds of sentences in which the head noun can be deleted from the surface structure. We do not fill the place of the noun in P.M.5 above because, as the interpretation of native speakers shows, N can dominate kas = "person", &axs = "person", zan = "woman", doxtar = "girl" or any other noun collocationally compatible with xub and mehrab@n. And in practice it does not matter for the process of deletion which of these lexical items is in the deep structure. What does matter is that the noun should be plural, or indefinite, or preceded by a determiner. However, for generating such sentences as 11, 12 and 13 from P.M.3, P.M.4

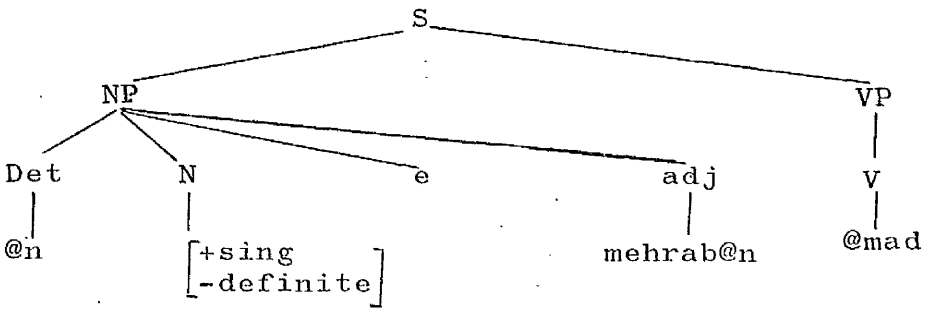
and P.M.5 respectively, we need to apply (a) T relative clause formation (restrictive), (b) T pronominalization, (c) T noun-phrase formation No.1. These convert P.M.3, P.M.4 and P.M.5 to P.M.6, P.M.7 and P.M.8 respectively.



P.M.6.



P.M.7.



P.M.8.

We now have to introduce a new T rule: T feature copying by adjective. By this rule, the adjective copies the features associated with the noun if these features are [- sing.] or [- definite] :

T feature copying by adjective:

$$SD = X - \underset{NP}{[(Y)} - \begin{bmatrix} N \\ \pm\text{sing.} \\ \pm\text{definite} \end{bmatrix} - \underline{e} - \underset{NP}{adj]} - Z$$

$$1 - 2 - 3 - 4 - 5 - 6$$

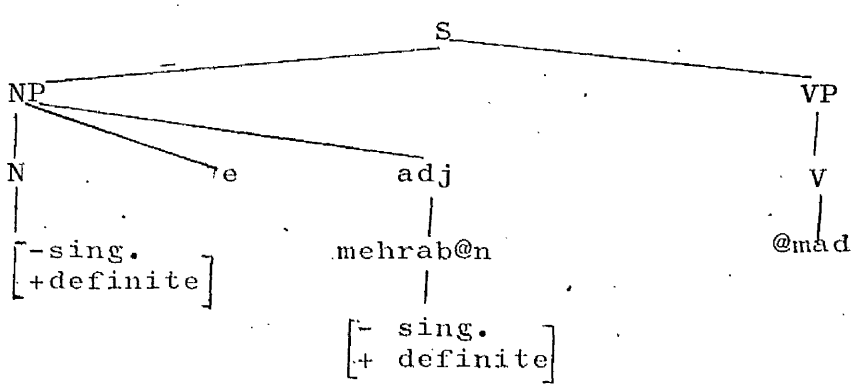
$\Longrightarrow$ optional

$$SC = 1 - 2 - 3 - 4 - 5 \begin{bmatrix} -\text{sing.} \\ -\text{definite} \end{bmatrix} - 6$$

Condition: either 3 = [- sing.]

or 3 = [- definite]

The rule shows that if 3(i.e.N) has the feature [- sing.] or [- definite] associated with it, the adjective can copy those features (needless to say, this rule can only refer to P.M. 6 and P.M. 7). After applying T feature copying by adjective, the tree diagram 7 would have the shape :



After the process of feature copying by adjective, we have to apply another T rule which we call T head deletion. By applying T head deletion, the head of NP construction, and also ez@fe marker (i.e. e), are deleted.

T head deletion:

$$SD = X - {}_{NP}\left[Y - N - e - \begin{bmatrix} adj \\ -sing \\ -definite \end{bmatrix} \right]_{NP} - Z$$

$$1 - 2 - 3 - 4 - 5 - 6$$

$\Rightarrow$ oblig/ after T feature copying. optional/2 = determiner

$$SC = 1 - 2 - \emptyset - \emptyset - 5 - 6$$

Condition: $5 < \begin{bmatrix} -sing \\ -definite \end{bmatrix}$

$2 =$ determiner.

This rule shows that the head noun should be deleted if the adjective has copied the features of the noun. Also the head noun can be deleted if 2 dominates a determiner. In the latter case, as the rule shows, we omit the noun and preserve the accompanying determiner. Therefore, T head deletion can generate the kind of sentence illustrated by 9, 10 and 11. The condition imposed upon T head deletion would block the generation of deviant sentences such as 15 and 16:

(good)(came)

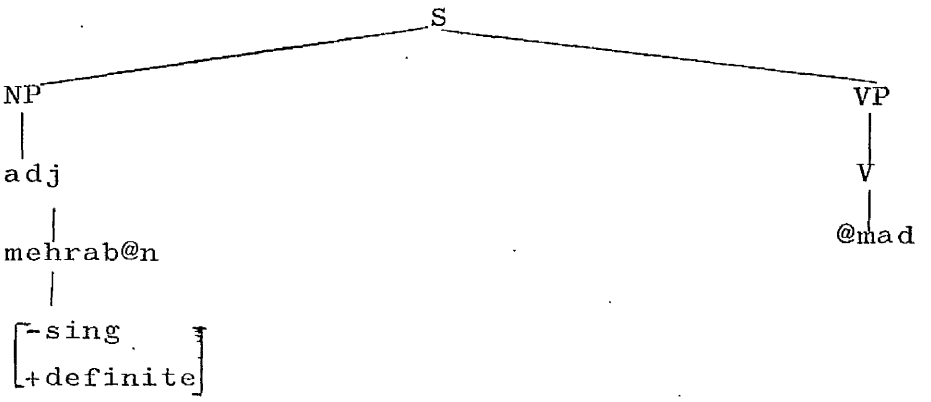
15:* xub @mad =* Good came.

(kind) (to) (I) (said) (that) (come)

16:* mehrab@n be man goft ke biy@ =

*Kind told me to come.

After applying T head deletion, the tree diagram, would have the shape:



P.M.10.

From what has been said above, the nature of overlapping cases between noun and adjective becomes clear. And it is learned that when we come to the field of surface structure, describing such cases as "noun-adjective overlapping" would be relevant. But in the deep structure, the syntactic behaviour of noun and adjective is different.

Once again, it becomes clear that the deep structure would help us to define the syntactic behaviour of grammatical elements with more precision, and it is in the deep structure that we can draw sharp lines between formatives (i.e. minimal syntactically functioning elements).

Here, we should clarify what might appear as a question for native speakers of Persian- the problem of the word jav@n = {"young" / "youth"}. Is it an adjective or a noun? The word jav@n = {"young" / "youth"} is considered to be an adjective in the traditional grammar of Persian. The point is that jav@n has two meanings. One of these corresponds to the word "young" in English. When it appears in this sense, it behaves like all adjectives in deep and surface structures. Its other meaning corresponds to the word "youth" in English (in its concrete sense). Although this meaning is related to the first meaning, it is not the same. With the latter meaning, the word jav@n is a noun and behaves as such in deep and surface structures. Thus, in 17, the word jav@n is a noun.

(youth)(girl) (followed)
17: jav@n doxtar r@ ta?qib-kard = The youth followed the girl.

And in 18, the word jav@n is an adjective which occupies the place of the noun in the surface structure.

(young-pl.)(in) (streets) (were marching)
18: jav@nh@ dar xiy@b@nh@ re3e-miraftand = The young (girls or boys, or girls and boys) were marching in the streets.

How Adjectives are derived from Verbs

There are two groups of adjectives which are derived from verbs. The members of one group are derived from the present tense stem and members of the other group from the past tense stem (itself derived from the infinitive). We will discuss each of these groups separately.

Adjectives derived from the Present Stem

I call one form of adjective, derived from the present tense stem, "the continuous participle".(i) It is constructed from the present stem plus the affix @n (not in the case of all verbs since @n is a derivational affix which can be applied to certain verb stems only). Thus we can have rav@n = {"going" / "running"} from the present stem rav = "go" and dav@n = "running" from the present stem dav = "run". We can have the following formula for forming them:

Present stem +@n $\Longrightarrow$ continuous participle.

The continuous participle has a semantic feature of [+ continuous] attached to it. It has no element of tense on it and the verb which comes after it determines its tense. Consider the following

---

(i) In most Persian Grammars, this has been refered to as the present participle and in others, as sefate f@?eli = "subject adjective". But I disagree with these labels for reasons to appear presently.

sentences:

(this)(water)(going)(is)

19: (a) in @b rav@n ast = This water is in motion .

(this)(water)(is going)

(b) in @b miravad = This water is flowing .

(that)(water) (going)(was)

20: (a) @n @b rav@n bud = That water was in motion .

(that)(water)(was going)

(b) @n @b miraft = That water was flowing .

19(a) and 19(b) and also 20(a) and 20(b) are paraphrases and this shows that there is an element of continuity in the continuous participle. On the other hand, considering 19(a) and 20(a), we can conclude that this kind of adjective is tenseless and, as we have already said, its tense can be determined by a verb which may follow it.

Another form of adjective which is derived from the present tense stem of the verb is one which is formed by the present tense stem plus the suffix @, present tense stem plus suffix g@r, or the present tense stem plus the suffix u. Thus, we can have d@n@ = "wise" from the present tense stem d@n = "know" and s@zeg@r = "agreeable" from the present

tense stem s@z = "tolerate" and tarsu = "cowardly" from the present tense stem tars = "fear". I put these three kinds of adjectives in one group on semantic grounds, because they refer to a constant property of the noun. And because of this I call them "constant participles".

The third kind of adjective derived from the present tense stem of the verb is one which is formed from the present tense stem plus the suffix ande. Thus we have ko&ande = "lethal" from the present tense stem ko& = "kill" and zanande = "appalling, awkward" from the present tense stem zan = "beat"(i). Consider the following examples:

(this)(dress)(awkward) (is)
21: (a) in leb@s zanande ast =

{This dress is appalling.
{This dress is undignified.

(dress) (awkward)
(b) leb@se zanande = undignified dress.

(this)(poison)(lethal) (is)
22: (a) in zahr ko&ande ast = This poison is lethal.

(i) We should notice here that from the present tense stem plus the same suffix (i.e. ande) we obtain a wide range of lexical items which belong to the category of nouns. They are all equivalent to agentive nouns in English. Thus we have r@nande = "driver" from the present tense stem r@n = "drive" and x@nande = "singer" from the present tense stem x@n = "sing" and s@zande = "maker", which has also an adjectival meaning: "constructive", from s@z = "make".

(poison)(lethal)
(b) zahre ko&ande = lethal poison.

In 21(a) and 22(a), the adjectives zanande = "awkward" and ko&ande = "lethal" behave as predicates of the sentence and in 21(b) and 22(b), the same adjectives are parts of NP constructions.

Adjectives derived from the Past Stem

The adjective derived from the past stem is the past participle which is constructed by adding e to the infinitive minus an. Thus we have rafte = "gone" from the infinitive raftan = "to go" and @made = "come" from the infinitive @madan = "to come". This mode of formation holds for all intransitive verbs. With some transitive verbs, it is necessary to add the past participle of the verb &odan = "to become" to the above mentioned construction. Consider the following examples.

23: (a) dozdidan = to steal
(b) dozdide-&ode= stolen

24: (a) didan = to see
(b) dide-&ode= seen

With some transitive verbs, it is not necessary to add &ode = "become" though it would not be wrong

if we did so. For instance, from the past stem ko&tan = "to kill" we can have 25(a) or 25(b):

25: (a) ko&te = killed

(b) ko&te-&ode = killed

There are also some transitive verbs which offer such a choice in some cases (e.g. when their past participles are being used as nouns in the plural) but which must have &ode in their past participles in other cases. For example from the infinitive didan = "to see" we have 26(a) or 26(b):

26: (a) dideh@

(b) dide-&odeh@ = things observed or seen.

But we can have only 27(a) and not 27(b):

27: (a) ket@be dide-&ode = the book seen.

(b)* ket@be dide

A note of caution is necessary: This sort of differentiation between the past participles of transitive verbs and those of intransitive verbs only holds where past participles are used as predicative adjectives (or, in the surface structure, when, under certain conditions (p.200), they are used as nouns). When they are used for the formation of a perfect tense, the situation is different. In short, there is no need to add &ode = "become" unless the formation

of the passive voice is intended.

(Hasan) (apple-a)(has eaten)

28: (a) hasan sibi xorde-ast = Hasan has eaten an apple.

(apple-a)(has been eaten)

(b) sibi xorde-&ode-ast = An apple has been eaten.

In order to show what the native speakers of Persian understand from this kind of adjective, we will put it in a phrase and show the paraphrase whose meaning is equivalent to that of the former phrase. 29 is a paraphrase of 30.

(water) (gone)

29: @be rafte = water gone .

(water)(that)({has / had} gone)

30: @bi ke rafte - {ast / bud} = the water that {has / had} gone away.

As the paraphrase shows, the meaning of the past tense or present tense is associated with the adjective <u>rafte</u> = "gone". The paraphrase also shows that <u>rafte</u> = "gone" refers to the subject of the sentence (the deep structure subject). Adjectives which are formed from transitive verbs refer to the object of the sentence (the deep structure object). Consider phrase 31 and its paraphrase which is shown by 32:

(food) (eaten)

31: qaz@ye xorde = food eaten.

(food) (that) ({has / had} been eaten)

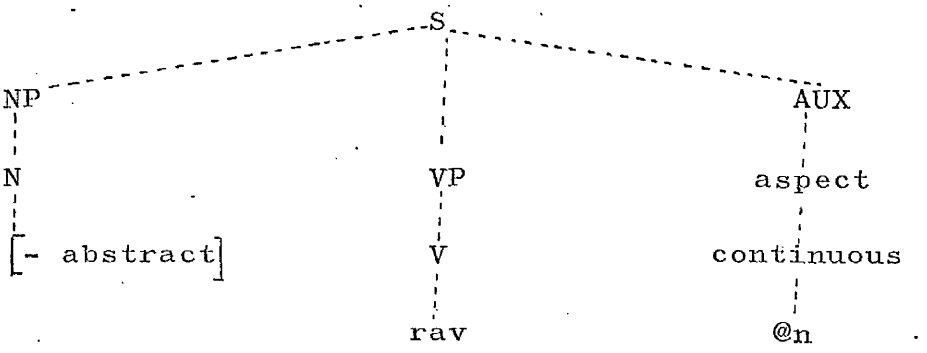
32: qaz@?i ke xorde-&ode - {ast / bud} = The food which {has / had} been eaten.

As the paraphrase 32 shows, in the case of adjectives formed from transitive verbs, the adjective refers to the direct object. That is why 32 has been formed by a passive verb. So, as we illustrated, the past participle creates two different meanings in the mind of native speakers of Persian according to the transitivity or intransitivity of the verbs from which it is derived.

Deep Structures for Adjectives derived from the Verb Stems and Connected Problems

---

While discussing the "continuous participle" which is derived from the present tense stem of the verb, we showed that there was an element of continuity in this kind of adjective, and also that it was tenseless. So, if we want to draw a deep structure for it, we have to show these two elements which cannot be seen in the surface. Therefore, the deep structure of a continuous participle like rav@n = "going - running" can be shown by P.M.11.



P.M.11.

P.M.11. shows that when we use the word rav@n = "going - running", we mean that someone or something (the feature [- abstract] associated with N shows this) has or had a continuous motion. The auxiliary has no tense and only shows the continuity of action; because, as we have said before, a continuous participle has no element of tense on it. A transformational rule which we call T continuous participle formation converts P.M.11 to a continuous participle.

T continuous participle formation:

SD = N - V - AUX

1 - 2 - 3

[± continuity]

$\Longrightarrow$ oblig

SC = ∅ - 2 + 3

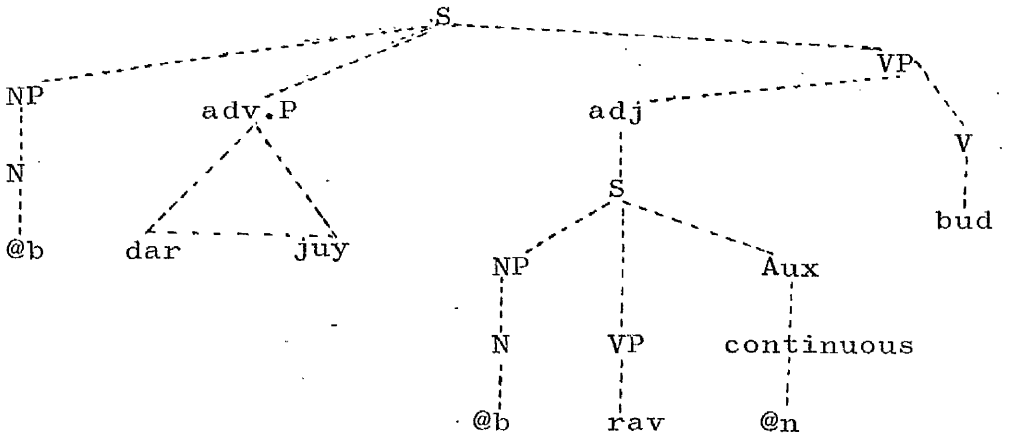
Condition: AUX < continuity only.

N < [-abstract] only

The rule shows that when N has the feature [- abstract] associated with it (in other words, if

it refers to someone or something) and also when the only component of the auxiliary is the aspect of continuity, we can omit N and attach the element of continuity to the verb stem. Although this analysis shows the deep structure of the continuous participle, there are problems involved. The first problem is that we cannot fit the suggested deep structure for the continuous participle into the deep structure of a sentence unless we change our phrase structure(base)rules and extend them with more and more rules. We showed that the adjectival phrase might consist of a single adjective or adjective plus sentence. If we want to fit our suggested deep structure for the continuous participle into a sentence, then in the deep structure of that sentence the node adjective should dominate only S and this is impossible according to the rules which we gave in the phrase structure(base)rules. For instance, for the deep structure of the sentence 33 we should have a P.M. like 12.

	(water)	(in)	(stream)	(going)	(was)	
33:	@b	dar	juy	rav@n	bud	= The water was flowing in the stream.



P.M.12.

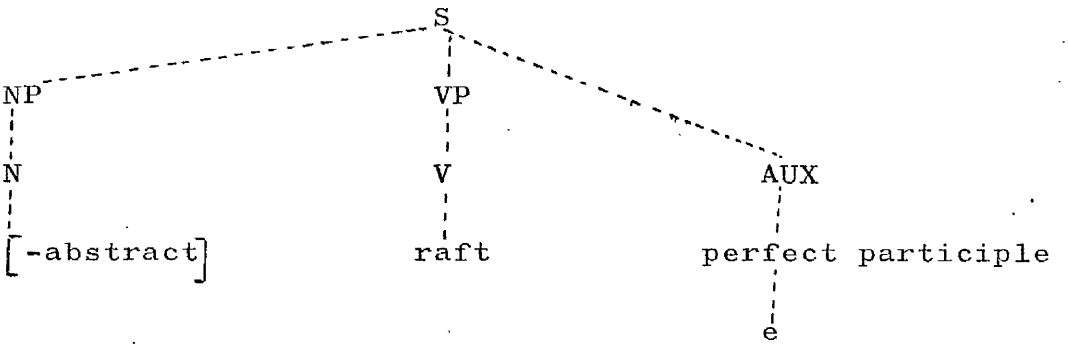
The second problem is that the marker of continuity in the actual sentence is mi whereas here it is @n(i). Furthermore, our P.S. rules state that tense is a compulsory part of the auxiliary. In P.M.11, AUX does not dominate tense because the continuous participle has no tense. This contradiction between our P.S. rules and the suggested deep structure of the continuous participle shows that the deep structure of a sentence and that of a word cannot be shown by the same rules.

Again, we want to show the deep structure of the past participle (i.e. the adjective derived from the

---

(i) Another element which denotes continuity is the use of the verb d@&tan = "to have" as an auxiliary with the main verb. Thus d@ram-miravam = "I am going", d@&t-mi@mad = "he was coming". But as we are not dealing with VP in this thesis, we limit ourselves to demonstrating the element of continuity only by mi the use of which is more widespread in the formal language.

past stem of the verb) according to the same pattern which we suggested for the continuous participle. We should notice that there are two deep structures involved. One of them is for those perfect participles which are derived from intransitive verbs. So, the deep structure for the adjective <u>rafte</u> = "gone" from the infinitive <u>raftan</u> = "to go" would be :



P.M.13.

The tree diagram shows that when the native speakers of Persian say or hear an adjective in the form of the perfect participle, they understand that it qualifies something or someone that has or had done some action (in the case of P.M.13, this action is <u>raftan</u> = "to go"). Here, we need a transformational rule for converting P.M13 into the past participle:

<u>T participle formational (intransitive)</u>:

SD = N - V - AUX

1 - 2 - 3 ⟹ oblig

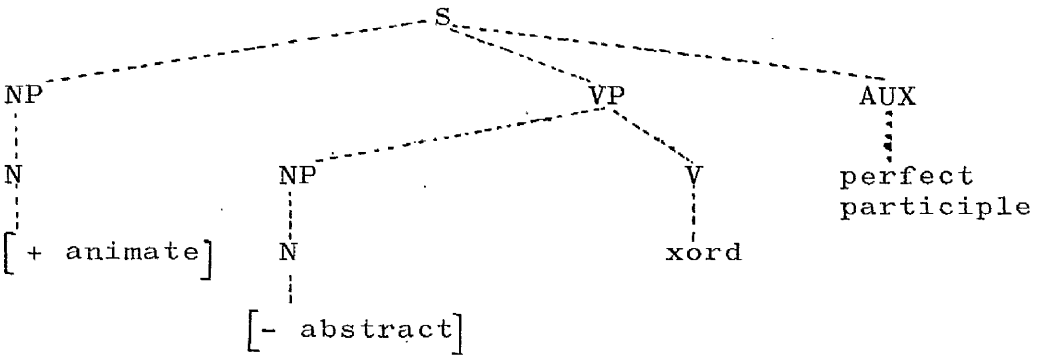
SC = Ø - 2 + 3

Condition: (a) NP < [-abstract]

(b) AUX < perfect participle

The rule shows that the NP should be omitted from the surface structure. Here, NP is understood by native speakers of Persian. The rule also shows that we have to attach e (i.e. perfect participle marker) to the end of the verb.

As we have illustrated above, the deep structure of those adjectives which are derived from transitive verbs differs from that of those adjectives which are derived from intransitive verbs in that the former refers to the object of the underlying sentence whereas the latter refers to the subject of the underlying sentence. Here, we illustrate the deep structure of the adjective xorde ="eaten" which is derived from the past stem xord = "ate" by phrase marker 14:



P.M.14.

P.M.14 shows that when native speakers of Persian say or hear an adjective in its perfect participle form which is derived from a transitive verb, they understand that an action has taken place upon something. The question "Who has done this action?" does not matter. That is why in P.M.14, the place of

NP>S is not filled from the lexicon. The difference between P.M.13 and P.M.14 is obvious. There is no NP which is dominated by VP in P.M.13 and this shows that the verb is intransitive. However, the common factor in the two tree diagrams (i.e. 13 and 14) is that in both of them the action is represented by a perfect participle. The transformational rule involved in the generation of the perfect participle of the past stem of a transitive verb would be:

T perfect participle formation (transitive):

SD = N - V - AUX

1 - 2 - 3

$\Longrightarrow$ oblig

SC = Ø - 2 + 3 - &ode

Condition: (a) N < [- abstract]

(b) AUX< perfect participle only.

This rule shows that we have to omit NP>S and also add e to the end of the verb in order to derive the adjective from the transitive verb. To add the element &ode (i.e. the past participle of the verb &odan = "to become") is not obligatory, and it depends on the usage of the language. As we have illustrated before, with some verbs, we have to add &ode to the end of the past participle concerned (like xaride-&ode= "bought", dide-&ode = "seen") and with some other verbs, we do not do this (like m@nde = "remained" or x@nde = "read"). T past participle formation (transitive) also shows that the rule should be applied when and only when the auxiliary

dominates the perfect participle and NP>VP has the feature [- abstract] associated with it.

As we discussed before (P.217), there are problems connected with this kind of analysis of adjectives. We have to show another problem apart from and in addition to those already mentioned. This is the question of the change of category from deep to surface structure. In three suggested P.M's (P.M.12, 13, 14), the adjectives are derived from verbs; that is to say in the deep structure this grammatical element is dominated by one node (i.e. VP) and in the surface structure by another node (i.e. adj). I am not inclined to say that by establishing a transformational rule we shift the element concerned from one node to the other because by doing this we would add more responsibility to transformational rules and make them even more powerful than they already are.

Bearing in mind the overall problem, namely that the deep structure of sentences and of words (if the latter have any deep structures) cannot be captured by the same rules (pp.217-218), we conclude that the two fields of syntax and morphology should be kept completely apart from each other. And this problem leads us to thinking more about the question of drawing a deep structure for adjectives. In other words, we can argue that an adjective, whether it is

derived from the verb or not, might bear a chain of different elements of meanings. And if we want to show all these interwoven semantic elements by deep structure, it means that we enter the semantic field and we want syntax to do the job of a dictionary as well. The meaning that every adjective or every word as a whole creates in the mind of native speakers can be shown by explaining it in a passage, and if we want to go into details of interpretation of the word, we might even write pages on it. How can this detailed job be formulated and captured by the same formula as that which we established for a grammar? Of course it cannot. Therefore, it would seem better if we leave the question of the interpretation of a word to be dealt with by a dictionary and not try to show this by syntax. It would be better too if we leave the internal structure of the words to be discussed and analysed by morphology. For instance, the formation of the continuous participle can be captured by a simple rule in the morphology:

Present stem of V + suffix $\Longrightarrow$ continuous participle.

$\underline{\text{rav}} + \underline{\text{@n}} \Longrightarrow \underline{\text{rav@n}}$.

"go" + suffix of continuity $\Longrightarrow$ going.

Adjective - Noun Constructions

In the previous chapter, we illustrated that a noun which is followed by an adjective made a noun-phrase and that a linking element which we called "ez@fe marker" occurred between them.

However, if an adjective precedes the noun which it defines, there would be no ez@fe marker between them. In such cases, N + adj might have two statuses:

(a) They construct a compound adjective like xubru = "pretty" siy@hdel = "black hearted". The meanings of xubru "pretty" and siy@hdel = "black hearted" are shown by 34 and 35 respectively:

(one)(that)(face)(good)(has)

34: {kasi / zani} ke ruye xub d@rad = {one / the woman} who has a pretty face.

(woman)

(one) (that)(heart)(black) (has)

35: {kasi / zani → (woman) / mardi} ke dele siy@h d@rad = {one / the woman / the man} who has an evil heart.

(man)

As we can see in 34 and 35 which are paraphrases for xubru = "pretty" and siy@hdel = "black hearted", there is an element of ownership in the meanings of these compound adjectives. In other words, they

qualify someone or something that owns the noun which constitutes the second element of these compound adjectives. Thus zane xubru = "pretty woman" and marde siy@hdel="evil hearted man" can be paraphrased by 36 and 37 respectively.

(woman)(that)(face) (good) (has)
36: zani ke ruye xub d@rad = the woman who has a pretty face.

(man) (that) (heart)(black) (has)
37: mardi ke dele siy@h d@rad = the man who has an evil heart.

(b) Adj + N can construct a phrase which we can take as a compound noun like pir(e) zan[(i)] = "old woman". pir(e) mard[(i)] = "old man", @z@d - zan "emancipated woman", jav@n_mard = "chivalrous man". In such cases, the meaning of the adjective usually changes slightiy. For instance, marde jav@n means "young man" whereas jav@n_mard = "chivalrous man".

It should be noted that in the case of compound words consisting of adj + N there is only one stress which falls on the final syllable of the second element whereas in phrases consisting of N + adj there are two stresses. Thus we have pir(e)zán[(i)] = "old woman" but záne pír = "old woman". Apart from this phonological fact, there are two other grammatical points which lead us to categorizing adj + N as a compound word and N + adj as a phrase.

(i) The optional e is not the ez@fe marker. It is a phonological element which facilitates pronunciation.

The first point is that in the case of N + adj , we can add the indefinite marker either to the end of the noun or to the end of the adjective. Thus we can have 38(a) or 38(b):

		(woman)(old-a)		(saw-I)			
38:	(a)	zane	piri	r@	didam	=	I saw an old woman.
		(woman-a)(old)			(saw-I)		
	(b)	zani	pir	r@	didam		

In the case of a construction consisting of adj + N, however, we have to add the indefinite marker to the end of the construction and this means we cannot split up the construction. Thus we can have 39(a) but not 39(b):

		(old woman-a)		(saw-I)		
39:	(a)	pir(e)zani	r@	didam	=	I saw an old woman.
		(old -a woman)		(saw-I)		
	(b)*	pir(e)izan	r@	didam		

The second point is that in the case of N + adj , the plural marker h@ or @n should be attached to the end of the noun. Thus we can have 40(a) but not 40(b):

		(women) (old)		
40:	(a)	zanh@ye pir	=	old women.
		(woman)(old-s)		
	(b)*	zane pirh@		

But in the case of adj + N the plural marker

should be added to the end of the whole construction. Therefore, we can have 41(a) but not 41(b):

(old women)

41: (a) pir(e)zanh@ = old women.

(old-s woman)

(b)* pirh@(ye)zan

As we have categorized adj + N as a compound word, we do not wish to draw a deep structure for it. As mentioned in the case of adjectives derived from the verb stem (p.222), there is no point in seeking a deep structure for words as this would involve a lot of theoretical problems.

List of Transformational Rules introduced in Chapter Four

T feature copying by adjective:

$$SD = X - {}_{NP}\Big[\ (Y) - \begin{matrix} N \\ [\pm sing \\ +definite] \end{matrix} - \underline{e} - adj\ \Big]_{NP} - Z$$

$$1 - 2 - 3 - 4 - 5 - 6$$

$$SC = 1 - 2 - 3 - 4 - 5 - 6 \Longrightarrow \text{option}$$

$$[-sing\ -definite]$$

Condition: either $3 = [-sing]$

or $3 = [-definite]$

T head deletion:

$$SD = X - {}_{NP}\Big[\ (Y) - N - \underline{e} - \begin{matrix} adj \\ [-sing \\ -definite] \end{matrix}\ \Big]_{NP} - Z$$

$$1 - 2 - 3 - 4 - 5 - 6$$

$$SC = 1 - 2 - \emptyset - \emptyset - 5 - 6 \Longrightarrow$$

oblig/ after T feature copying. optional/ 2 = determiner.

Condition: $5 < [-sing\ -definite]$

2 = determiner

CHAPTER FIVE

Determiners

There is a class of words, associated with nouns, which traditional Persian grammar classifies as adjectives, because they modify nouns. Some Persian grammarians (notably Abdul-Azim Qarib) have classified some members of this class as a separate part of speech, under the title "number"(i). I believe that the whole class should fall within the bounds of one part of speech which I refer to as "Determiners".

The reason for this classification is that they have common characteristics and, at the same time, are distinct from adjectives; their status differs from that of adjectives in the surface structure.

(a) Unlike adjectives which follow the noun more often than not, determiners always precede the noun to which they refer and cannot possibly follow it. For instance we can have:

1: do miz = two tables

2: har miz = every table

3: cand miz = a few tables

4: in miz, @n miz = this table, that table

(i) Qarib, A.A., 1950. Dasture Zabane Farsi, Chapter 4.

5: candin miz = several tables

6: hic mizi = no table

But we cannot have :

7: * miz do

8: * miz har

etc., etc.

(b) They differ from adjectives in that they cannot occur as predicates in equational sentences. For example we cannot have 9 or 10 :

9: * miz do ast

10: * miz har ast (i)

(i) An argument may arise over sentences such as (table)(this)(is) miz in ast = "The table is this" or (this)(number) in adad (four)(is) c@h@r ast = "This number is four". We simply have to point out that some determiners, in surface structure, can stand in the place of the noun they determine. That is why I call them "pronominal determiners" as a sub-category of determiners. In the sentence (table)(this) miz in (is) ast = "The table is this", in is substituted for an NP construction such as (this)(object) in ciz = "This object". In the latter sentence, again, the determiner c@h@r = "four" is substituted for an NP such as (number)(four) adade c@h@r = "number four" and the sentence means (this)(number) in adad (number)(four)(is) adade c@h@r ast = "This number is number four". Here are some more examples: (nothing)(not-said-I) hic nagoftam = "I said nothing" in which hic, a pronomial determiner, stands in the place of hic ciz = "nothing" and (which) kod@m r@ (picked up-you) bard@&ti = "Which one did you pick up" in which kod@m (a pronominal determiner) stands in the place of an NP construction i.e. kod@m + N.

(c) Unlike adjectives, determiners have no degree of comparison. Thus we cannot have 11 or 12:

(several-est)(book)
11:* candtarin ket@b

(book)(every-er)
12:* ket@be hartar

(d) Unlike adjectives, determiners cannot be inflected like nouns and, therefore, can never be inflected with plural markers (h@, @n) (i) or with the indefinite marker. Thus 13 and 14 are deviant:

(a few-s)(book)
13:* c@ndh@ ket@b

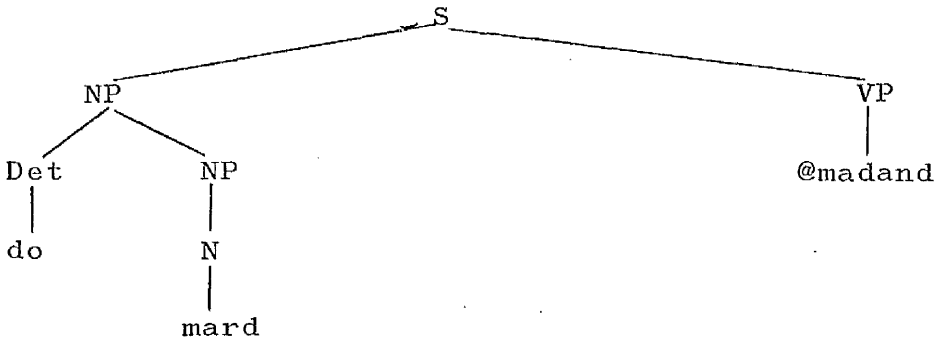
(every-a)(table) (ii)
14:* hari miz

Having these points in mind, we suggest that the deep structure of determiners should be different from that of adjectives. And, as we show in our phrase structure (base) rules, NP could simply consist of Det - NP. So the deep structure of a sentence such as 15 would simply be P.M.1.

(i) in = "this" and @n="that" are the only determiners to which the plural marker can be added. Thus we can have inh@ = "these" and @nh@="those". But even this is a limited option and can happen only when in and @n replace nouns.

(ii) The adverb candi="for some time" seems to have been derived from the old adverbial meaning of cand(="for how long?")which is now obsolete. In the adverb cand@n="so much", @n is obviously not a plural marker.

(two)(man) (came)
15: do mard @madand = Two men came.



P.M.1.

And the only T rule which we need to apply to P.M.1 would be T concord.

In Persian, we might have a chain of determiners before a noun. This is like a chain of adjectives (usually occuring after a noun). Thus we can have sentences like 16, 17 and 18:

(this)(two)(table) (take)
16: in do miz r@ bard@r = Take these two tables.

(any)(two)(book) (that)(want-you)(take)
17: har do ket@bi r@ ke mix@hi bard@r = Take any two books which you want.

(this)(few) (page) (read-I)
18: in cand varaq r@ x@ndam = I read these few pages.

On the other hand, 19, 20 and 21 are deviant:

19:* do in miz r@ bard@r

20:* do har ket@bi r@ ke mix@hi bard@r

21:* cand in varaq r@ x@ndam

The examples above show that when two determiners occur in one sentence, the occurrence of them has to be under certain restrictions and they cannot occur in free order. With adjectives, this is not so and we can have a sequence of adjectives with free order. Thus 22(a) and 22(b) are both acceptable.

(man) (old) (wise) (saw-I)

22: (a) marde pire d@n@?i r@ didam = I saw an old wise man.

(man) (wise) (old) (saw-I)

(b) marde d@n@ye piri r@ didam = I saw a wise old man.

The restriction on the order of determiners in addition to some particular properties which are peculiar to each of them, and which we will illustrate afterwards, leads us to sub-categorizing them and showing the different syntactic behaviours which are peculiar to each of them.

1 - Cardinal Numbers

Cardinal numbers occur immediately before nouns if there is another determiner in the NP

construction. For instance, 23 is grammatical but 24 is deviant:

(that)(two)(man) (came-they)
23: @n do mard @madand = Those two men came.

(two)(that)(man) (came-they)
24:* do @n mard @madand

A noun which is preceded by a cardinal number can be definite or indefinite (i). For instance, nouns preceded by a cardinal number can be followed by restrictive or non-restrictive clauses. Consider the following examples:

(thousand)(soldier) (that)(in) (desert)
25: hez@r sarb@zi ke dar biy@b@n
(were) (lost-became)
budand gom-&odand = The one thousand soldiers who were in the desert lost their way.

(thousand)(soldier)(that)(in) (desert)
26: hez@r sarb@z, ke dar biy@b@n
(were) (lost-became)
budand, gom-&odand = One thousand soldiers, who were in the desert, lost their way.

In 25, the clause (that)(in) (desert) (were)
ke dar biy@b@n budand

(i) We have discussed the definiteness and indefiniteness of the noun when preceded by a cardinal number under the heading "The Three Senses of the Noun" (p.253)

= "who were in the desert" is a restrictive clause, but in 26, the same clause is non-restrictive. As we have shown (P.84) the occurrence of i which is attached to the end of sarb@z = "soldier" and which we call "restrictive clause marker" shows this fact.

2 - Demonstratives

By demonstratives we mean in = "this" and @n = "that". They occur immediatley before nouns if there is no other determiner in the NP construction. Thus we have 27 as a grammatical sentence:

(that)(book) (took-I)
27: @n ket@b r@ bard@&tam = I took that book.

If an NP, however, consists of a cardinal number and a demonstrative and one of the other members of the class of determiners plus noun, the demonstrative would occur before the cardinal number, or before other members of the class of determiners. Thus 28 is acceptable, whereas 29 is deviant:

(that)(two) (book) (took-I)
28: @n do ket@b r@ bard@&tam = I took those two books.

(two) (that)(book) (took-I)
29:* do @n ket@b r@ bard@&tam

And also 30 is grammatical but 31 is deviant:

(that)(every)(two)(book) (took-I)

30: @n har do ket@b r@ bard@&tam =

I took both of those two books.

(every)(that)(two)(book) (took-I)

31:* har @n do ket@b r@ bard@&tam

Nouns preceded by demonstratives can be followed by restrictive or non-restrictive clauses. Here are some examples:

(that)(man) (that) (every) (day)(to) (home)

32: @n mardi ke har ruz be x@neye

(we) (came) (neighbour)(we-is)

m@ mi@mad hams@yeye m@st = The man who came every day to our house is our neighbour.

(that)(man) (that)(every)(day) (to) (home) (we)

33: @n mard, ke har ruz be x@neye m@

(came) (neighbour) (we-is)

mi@mad, hams@yeye m@st = That man, who came every day to our house, is our neighbour.

3 - Unspecified Determiners

har = {"every" / "any"}, hic = "no" (as in nobody or no-one), kami = {"some" / " a little"} and hame = "all" (only when it occurs before kas= "person", otherwise it would be a pronominal determiner(i)) are mutually exclusive with demonstratives. Therefore, we cannot have 34 or 35 .

(i) See Pronominal Determiners (p.241).

(this)(all)(person) (comes)
34:* in hame kas mi?@yad (i)
(this)(some)(water)
35:* in kami @b

inhame "all these" or @nhame = "all those" as compound determiners precede the noun. Thus we can have:

(this-all)(book)(that)(burnt) (belong to)
36: inhame ket@b ke suxt m@le
(I) (was)
man bud = This great multitude of books which burnt was mine.

Of the determiners that we mentioned above, kami ="a little"and hame = "all"are mutually exclusive with cardinal numbers (ii). Thus we cannot have structures like 37 or 38.

(all) (two) (book)
37:* hame do ket@b
(a little)(three)(book)
38:* kami se ket@b

(i) When har does occur with @n = "that" in har-@n-kas = "anyone"and har-@n-j@ ="anywhere", @n has no demonstrative function and the whole construction constitutes a compound pronoun and a compound adverb respectively.

(ii) hame ="all", in the sentence hameye hez@r mard @madand = "All of the thousand men came", is a pronominal determiner (see p. 241).

When har = "every" and hic = "no" occur with an NP containing a cardinal number, they are followed by NP. Thus we have:

(no) (two) (person)
39: hic do nafari = no two people.

(every)(two)(book)
40: har do ket@b = both books.

(any)(two)(book)
41: har do ket@bi = any two books.

We can see, in the examples above, that a noun preceded by har should have i at the end of it if har has a meaning equivalent to that of "any" in English. Thus we can have:

(any) (book) (good) (is)
42: har ket@bi xub ast = Any book is good.

ket@b in 42 is indefinite. If, however, har has the meaning of "every", we can omit i from the end of the noun preceded by har or we can preserve it. Therefore we can have 43 and 44.

(four)(book) (in) (library) (is) (and)
43: c@h@r ket@b dar ket@bx@ne hast va
(every)(book) (cover) (leather)(has)
har ket@b jelde carmi d@rad = There are four books in the library and every book has a leather cover.

(four) (book) (in) (library) (is) (and)
44: c@h@r ket@b dar ket@bx@ne hast va
(every)(book) (cover) (leather)(has)
har ket@bi jelde carmi d@r^{a}d =
There are four books in the library and every book has a leather cover.

A noun preceded by hic should take i at the end of it. Thus we should have 45 and we cannot have 46:

(no) (book) (bad) (not-is)
45: hic ket@bi bad nist = No book is bad.

(no) (book) (bad) (not-is)
46:* hic ket@b bad nist

There are two exceptions to this rule. These are hickas = "nobody" and hicciz = "nothing".

The nouns preceded by har and hic take only a restrictive clause after them. Thus we can have:

(every)(book) (that) (in) (this)(library)
47: har ket@bi ke dar in ket@bx@ne
(is) (worthy) (is)
hast arze&mand ast = Every book which is in this library is worthy.

(no) (book) (that) (is not worthy)(in)(here)
48: hic ket@bi ke nayarzad dar inj@
(not-is)
nist = There is no book here which is not worthy.

And we cannot have counter examples of 47 and 48 with non-restrictive clauses:

(every)(book) (that)(in) (this)(library)
49:* har ket@b, ke dar in ket@bx@ne
(is) (valuable) (is)
ast, arze&mand ast

(no)(book) (that)(is not worthy) (in) (here)
50:* hic ket@b, ke nayarzad, dar inj@
(not-is)
nist.

A noun preceded by kami = {"a little" / "some"} takes only a non-restrictive clause after it. Thus we can have 51 and 52:

(a little)(water)(that) (in)(water pot) (was)
51: kami @b ke dar kuze bud
(poured out)
rixt = A little water which was in the water pot was poured out.

(a little)(water) (that) (in) (water pot)(was)
52:* kami @bi ke dar kuze bud
(poured out)
rixt

With hame and cand, we can either have a restrictive or a non-restrictive clause. Consider the following examples:

(a few) (book) (that) (had bought-I)(lost-became)
53: cand ket@bi ke xaride-budam gom-&od
= The books which I had bought were lost.

(a few) (book) (that) (had bought-I)
54: cand ket@b, ke xaride-budam,
(lost-became)
gom-&od = A few books, which I had bought, were lost.

In above examples, 53 has a restrictive clause embedded in it and 54 contains a non-restrictive clause. And here are examples of hame = "all" with restrictive and non-restrictive clauses:

(all) (students) (that) (here) (were)
55: hameye &@gerd@ni ke inj@ budand
(went)
raftand = All students who were here went.

(all) (students) (that) (here)(were)
56: hameye &@gerd@n, ke inj@ budand,
(went)
raftand = All students, who were here, went.

4 - Pronominal Determiners

There are a very few determiners which need special description so far as transformational rules are concerned. This necessity arises because of the fact that, in the surface structure, they appear in a different manner from that of other determiners. These are yeki= "one" hame = "all", ba?zi = "some", hicyek = "none". We call them

pronominal determiners because they can stand in the place of the head noun in the surface structure whereas other determiners cannot. Consider the following examples:

(some)(of) (students) (came)

57: (a) ba?zi az &@gerd@n @madand = Some of the students came.

(some) (of) (they) (came)

(b) ba?zi az @nh@ @madand = Some of them came.

(some) (came)

(c) ba?i @madand = Some came.

(none) (of) (students) (not-came)

58: (a) hicyek az &@gerd@n nay@madand = None of the students came.

(none) (of) (they) (not-came)

(b) hicyek az @nh@ nay@madand = None of them came.

(none) (not-came)

(c) hicyek nay@madand = None came.

(all) (students) (came)

59: (a) {tam@me / hameye} &@gerd@n @madand = All of the students came.

(all) (they) (came)

(b) {tam@me / hameye} @nh@ @madand = All of them came.

(all) (came)

(c) {tam@m / hame} @madand = All came.

(one) (of) (students) (came)

60: (a) yeki az &@gerd@n @mad = One of the students came.

(one)(of) (they)(came)

(b) yeki az @nh@ @mad = One of them came.

(one)(came)

(c) yeki @mad = One came.

The above examples show that when some of the determiners occur before a noun or a pronoun, the word az = "of" should occur between them and the noun they determine. This is so in the case of hicyek = "no", yeki = "one" and ba?zi = "some". In the case of hame = "all" there is ez@fe marker between determiner and head noun. Moreover, as the examples show, in (c)'s these determiners stand by themselves and occupy the place of &@gerd@n = "students" which is the head noun. Other determiners like har = "any" and do = "two" cannot stand by themselves in the place of the noun in the surface structure. The following examples show this state of affairs:

(some) (of) (books) (that)(in) (this)

61: (a) ba?zi az ket@bh@?i ke dar in

(library) (is) (valuable) (is)

ket@bx@ne hast b@?arze& ast = Some of the books which are in this library are valuable.

(some) (valuable) (is)

(b) ba?zi b@?arze& ast = Some are valuable.

(any)(book) (that) (in) (library)

62: (a) har ket@bi ke dar ket@bx@ne

(is) (valuable) (is)

hast b@?arze& ast = {Any / Every} book

which is in the library is valuable.

(any) (valuable) (is)

*(b) har b@?arze& ast

(of) (inhabitants)(alley) (you) (some)

63: az s@ken@ne kuceye &om@ ba?zi r@

(know-I)

mi&en@sam = I know some of the

inhabitants of your alley.

(of) (inhabitants) (alley) (you)

64:* az s@ken@ne kuceye &om@

(any) (know-I)

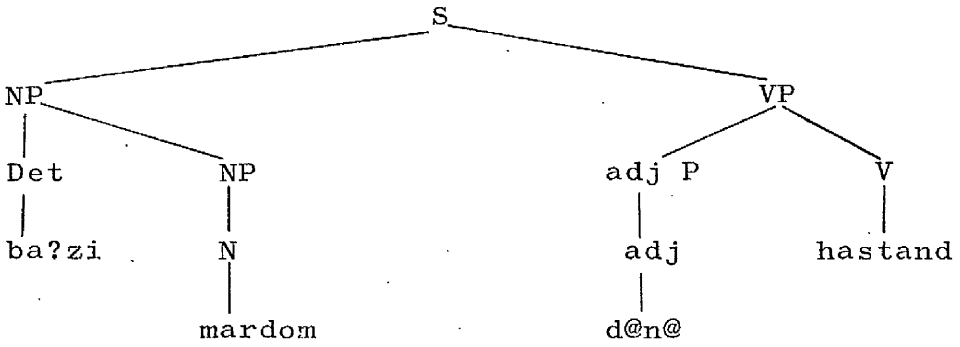
har r@ mi&en@sam

As the examples above show, ba?zi = "some", which we call a pronominal determiner, can stand in the place of the head noun whereas har = {"every" / "any "} cannot. Therefore, we have to have a special T rule for generating sentences in which these determiners appear in the place of the head noun and sentences in which these determiners are accompanied by nouns. For generating such sentences as 57(a) and 57(c) on p.242, we have to introduce two different T rules. One of them introduces az between some determiners (i.e. ba?zi, hicyek, yeki) and the head noun and e between the head noun and other determiners. Application of this T rule for generating sentences which are formed by ba?zi is optional. The other

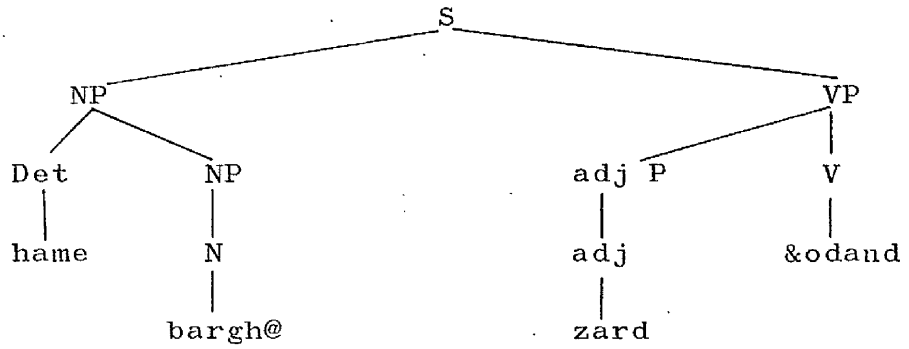
is for deletion of the head noun. For illustrating this process, we first show the deep structures of the sentences 65 and 66 by P.M.2 and P.M.3:

(some) (of) (people) (wise) (are)
65: ba?zi az mardom d@n@ hastand = Some of the people are wise.

(all) (leaves) (yellow) (became-they)
66: hameye bargh@ zard &odand = All of the leaves became yellow.



P.M.2.



P.M.3.

T az and e insertion:

SD = X - Det - NP - Y

1 - 2 - 3 - 4

SC = 1 - 2 - { az if 2 < { yeki, ba?zi, hicyek } ; e if 2 < { tam@m, hame } } - 3 - 4

⇒ optional/ Det=ba?zi oblig/ otherwise

The rule shows that if the determiner is ba?zi, we can add az between the determiner and the head noun and if the determiner is yeki or hicyek, we have to add az between the determiner and the head noun. On the other hand,if our determiner is hame or tam@m we have to add e between the head noun and them. T az and e insertion prevents the grammar from producing such sentences as 67 and 68 which are deviant.

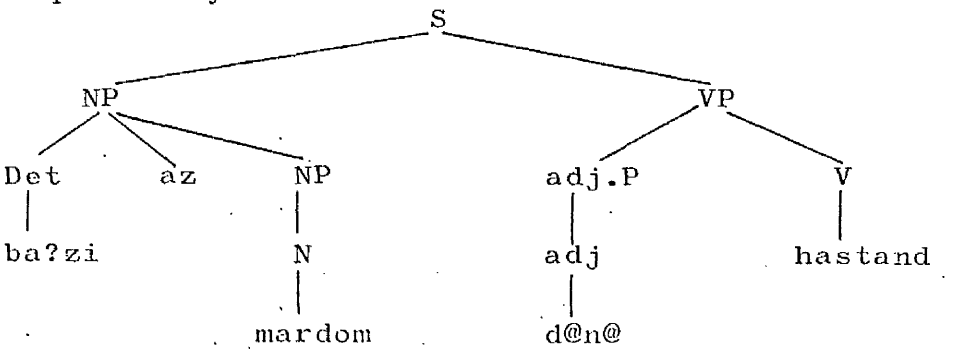
(all) (of) (people) (came-they)

67:* tam@m az mardom @madand

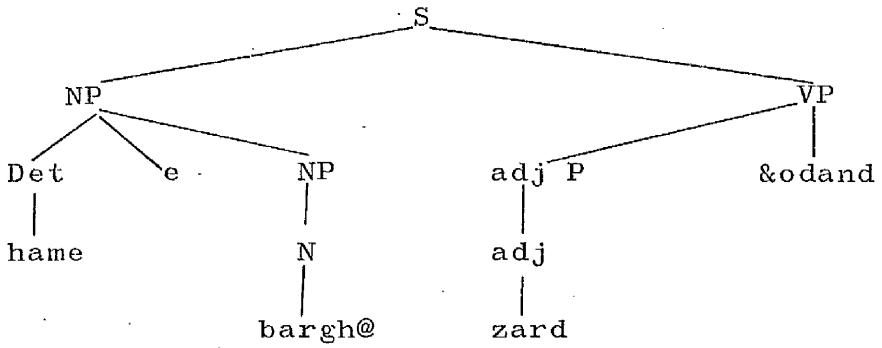
(one of)(students) (came)

68:* yekiye &@gerd@n @mad

After applying T az and e insertion, P.M.2 and P.M.3 would assume the shapes of P.M.4 and P.M.5 respectively:



P.M.4.



P.M.5.

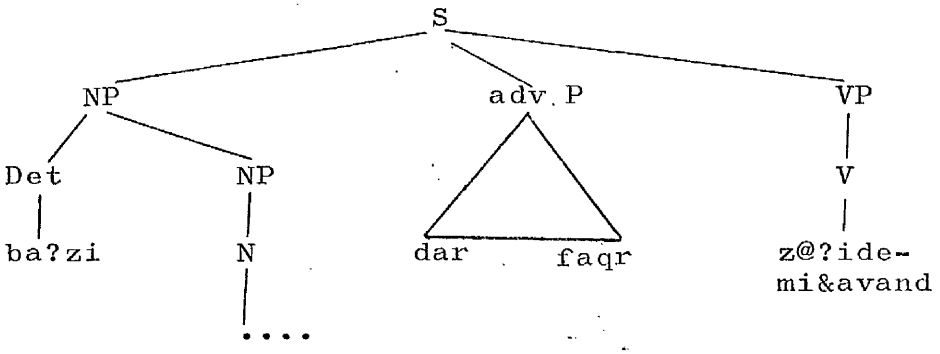
For generating such sentences as 69 and 70, we need a T rule which we call T head deletion.

(some) (in) (poverty)(born) (become-they)
69: ba?zi dar faqr z@?ide mi&avand =
Some are born in poverty.

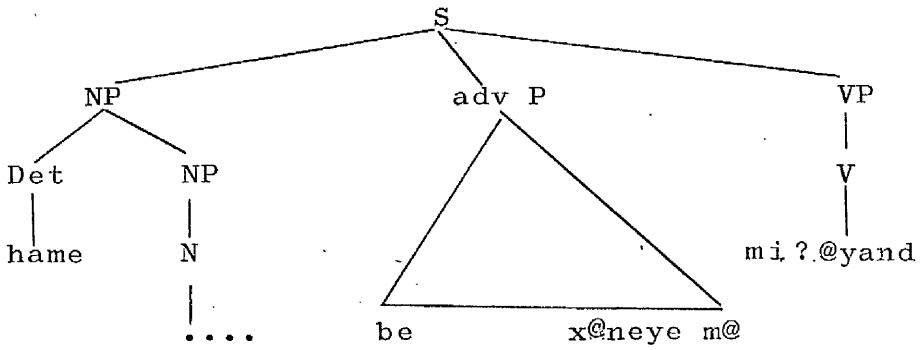
(all) (to) (house) (we)(come-they)
70: hame be x@neye m@ mi?@yand = All
come to our house.

The deep structures of 69 and 70 have a head noun which is deleted in the surface structure. According to the context in which sentences like 69 and 70 are uttered, this noun can be animate or inanimate, abstract or concrete. Of course, in the case of 69 and 70, the verbs (born) (become) z@?ide mi&avand = "they are born" and mi?@yand = "they come" show that the noun should be animate; so we need not have any special semantic feature associated with the head noun in the deep structure. For showing the

deep structure of these sentences, we fill the place of the noun by dots to show that it could be filled by any noun provided syntactic considerations are fulfilled. The deep structures of 69 and 70 are shown by P.M.6 and P.M.7 respectively:



P.M.6.



P.M.7.

And here is the optional T rule for generating 69 and 70:

T head deletion:

SD = X -Det- NP - Y

1 - 2 - 3 - 4 $\Longrightarrow$ optional

SC = 1 - 2 - Ø - 4

T rule continued on the next page

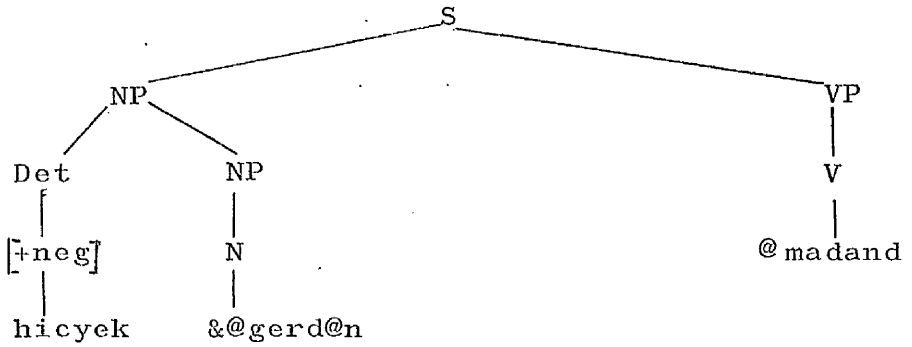
Condition: 2 < { ba?zi, yeki, hame, tam@m, hicyek }

The rule shows that if the noun is preceded by either of the determiners mentioned above, we can delete the noun from the deep structure and yet have a complete sentence.

For generating sentences with the determiner hicyek = "none" or "anyone", we should notice that we need another T rule which concerns the concord in negation between the verb and the NP containing hicyek = "none" or "anyone". In other words, the verb which comes in sentences formed by hicyek = "none" whould be negative. So we have to have [+ neg] associated with the determiner hicyek = "none" in the deep structure. And then this feature is to be copied by the verb. The process is shown by the generation of 71 from P.M.8:

	(none)	(of)	(students)	(not-came-they)
71:	hicyek	az	&@gerd@n	nay@madand

= None of the students came.



P.M.8.

And the T rule which is involved would be:

T neg copying:

SD = X - Det - NP - $_{VP}[$ Y - V $]_{VP}$ - Z

1 - 2 - 3 - 4 - 5 - 6

$\Rightarrow$ oblig

SC = 1 - 2 - 3 - 4 - 5 - 6

[+neg]

Condition: 2 < [+neg]

The rule shows that the verb should copy the feature of the determiner if the feature is [+neg]. The rule is obligatory and prevents the grammar from generating sentences such as 72:

(none) (of) (students) (came)

72:* hicyek az &@gerd@n @madand

Notice that the translation equivalent to 72 in English is grammatical. The point which should be made clear here is that 72 is grammatical if it is uttered with an interrogative intonation. That

is when the node Pre-sentence dominates @y@ (see page 51).

A question might arise as to why we regard az as an element of the surface structure and not one of the deep structure. As we have illustrated, az only appears in the surface structure of sentences formed by the determiner ba?zi = "some" and not in sentences formed by other determiners. If we consider az as an element of the deep structure, we have to add unnecessarily two different phrase structure rules to the list of our phrase structure(base) rules which we have already had (i.e. one to generate sentences with ba?zi and another with hame and tam@m). This makes the phrase structure(base)rules more lengthy, which is not economical. For if we consider az as an element of the deep structure, then why should we not consider e as an element of the deep structure as well? Apart from consideration of economy , the fact that az does not appear in all sentences formed by other determiners and that even in sentences formed by ba?zi = "some", az can be omitted [i] shows that it is not an element of the deep structure.

(i) That is why T az and e insertion is optional for the sentences formed by az (p.246.).

List of Transformational Rules introduced in Chapter Five

T az and e insertion:

SD = X - Det - NP - Y

1 - 2 - 3 - 4

SC = 1 - 2 - { az if 2 < { ba?zi, yeki, hicyek } ; e if 2 < { tam@m, hame } } - 3 - 4

⟹ optional/ Det=ba?zi oblig/ otherwise

T head deletion:

SD = X - Det - NP - Y

1 - 2 - 3 - 4

⟹ optional

SC = 1 - 2 - ∅ - 4

Condition: 2 < { ba?zi, yeki, hame, tam@m, hicyek }

T neg. copying:

SD = X - Det - NP - $_{VP}[$ Y - V $]_{VP}$ - Z

1 - 2 - 3 - 4 - 5 - 6

⟹ oblig

SC = 1 - 2 - 3 - 4 - 5 - 6

[+ neg]

Condition: 2 < [+neg]

CHAPTER SIX

More about Noun-Phrases

The Three Senses of the Noun

The noun has three senses in Persian : (a) Definite, (b) Indefinite , (c) Generic . We are going to discuss each of these separately .

a : Definite

A definite noun in Persian has no mark on it[(i)]. Thus, in sentences 1,2 and 3,the noun pesar="boy" is definite :

(boy) (came)
1: pesar @mad = The boy came .

(boy) (where) (was)
2: pesar koj@ bud = Where was the boy ?

(to) (boy) (looked-I)
3: be pesar neg@h-kardam = I looked at the boy .

(i) In colloquial Persian (Tehran dialect) , the definite marker would be e at the end of NP . Thus, in the sentences (the boy) (came) pesare umad = " The boy came" or (boy)(good-the)(came) pesar xube umad = " The good boy came", pesare="the boy"and pesar xube="the good boy"are definite . When a noun is followed by an adjective, as we illustrated in the above example, the ez@fe marker is omitted. It should be noted that the colloquial definite marker is stressed and not added to the plural nouns. Thus, for example, *ket@b@e is not acceptable (ket@b@ being the colloquial version of ket@bh@ = "books") .

When a noun without the indefinite marker is a direct object in a sentence, it is definite if it is followed by r@ . Thus , the noun ket@b = "book" is definite in the sentence :

	(Ali)	(book)		(bought-he)	
4 :	ali	ket@b	r@	xarid	= Ali bought the book

So, the definiteness of the nouns should be shown in the deep structure . And if a noun has the feature [+definite] attached to it and is a direct object, then the occurrence of r@ after it would be obligatory in the surface structure .

The nouns which occur after demonstratives are definite in all cases . Thus, 5(a) is grammatical , and 5(b) in which r@ is omitted is also grammatical if we want ket@b = "book" to be in its generic sense . 6(a) is also grammatical . In 6(a), the noun is preceded by a demonstrative and followed by r@ . But 6(b) is deviant because , as we have already said , a noun accompanied by a demonstrative is always definite and we cannot omit r@ (i.e. the direct object marker) which is the clue to definiteness as well.

		(I)	(book)		(bought - I)	
5 :	(a)	man	ket@b	r@	xaridam	=

I bought the book .

		(I)	(book)	(bought - I)
	(b)	man	ket@b	xaridam

$$= \begin{cases} \text{I bought books.} \\ \text{I bought a book .} \end{cases}$$

6 : (a) (I) man (that) @n (book) ket@b r@ (bought-I) xaridam = I bought that book.

(b) *(I) man (that) @n (book) ket@b (bought-I) xaridam

b: Indefinite

Indefinite nouns are followed by i or preceded by yek (i). Thus, for "a book", we can have ket@bi or yek ket@b. When dealing with restrictive clauses (p.83), we mentioned that nouns followed by a restrictive clause have i at the end of them whether they are definite or indefinite. So, i occurring before a clause indicates that the clause is a restrictive one. This i has nothing to do with the definiteness or indefiniteness of the noun. Consider the following examples :

7 : (tree) deraxti (that) ke (planted-I) k@&tam (green-became) sabz - &od =

The tree which I planted came into leaf.

8 : (tree) deraxti (that) ke (fruit) mive (not_has) nad@rad (useful) mofid (not-is) nist = A tree which does not have fruits is not useful.

(i) In colloquial Persian, i and yek may occur simultaneously. For example: (a) (a book) yek ket@bi (bought-I) xaridam = "I bought a book".

In 7 , the noun deraxt = "tree" is definite and in 8 , the same noun , with the same grammatical status, is indefinite .

A noun preceded by a cardinal number can be definite or indefinite . An indefinite noun which is preceded by a cardinal number is not marked by the indefinite marker i . The definiteness or indefiniteness of the noun is shown by the change of intonation when NP is the subject of the sentence . Consider the following example :

(four) (man) (came)
9: c@h@r mard @madand = Four men came.(indefinite)

If we want (four) (man) c@h@r mard = " four men " to be indefinite , we have to have rising tone in c@h@r , level tone in mard and falling tone in @madand . In 9 , c@h@r , mard and @madand are nuclear (i) . And we can have 10 in which the words mard and @madand are nuclear and the word c@h@r is head and also in which the word mard is pronounced with a level tone and @madand with a falling tone . NP in 10 is definite :

(four) (man) (came)
10: c@h@r mard @madand = The four men came .

(i) Discussing the intonation patterns is beyond our limits. We illustrate it briefly in order to clarify this factor which affects the syntax . For the definition of the terms which are connected with intonation, see Intonation of Colloquial English , J.D. O'Connor and G.F. Arnold , 1971 .

As the examples show , when NP is preceded by one of the cardinal numbers , its definiteness or indefiniteness is indicated by the intonation of the whole sentence . The element i , when occurring after an NP which is preceded by a cardinal number , is not an indefinite marker . It shows the approximation of the cardinal number . Consider the following example :

	(thousand)	(person)	(to)	(that)	(banquet)
11:	hez@r	nafari	be	@n	ziy@fat

(had been invited)
da?vat - &ode - budand = About a thousand people had been invited to that banquet .

In 11 ,the element i which is attached to the end of nafar = "person" does not show the indefiniteness of nafar ; it shows the approximation of the cardinal number hez@r = " thousand" . To make this point clearer , we will give another example:

	(four)	(Tuman)	(to)	(Parvin)	(gave-I)
12:	c@h@r	tum@ni	be	parvin	d@dam =

I gave Parvin about four Tumans .

In 12 , c@h@r tum@n = "four Tumans" is obviously not indefinite . The element i shows that c@h@r = "four" is not the exact amount of money which is given to Parvin. One might argue that there is an exception so far as the simultaneous occurrence of a cardinal number and the element i is concerned. This arises with the occurrence of yek = "one" .

	(a)	(man)	(came)
13:	yek	mardi	@mad = A man came .

It should be noted that , here , yek = "one" does not behave as a cardinal number but as an indefinite marker. Under the heading "Definite" (p.253), we have mentioned that , in colloquial Persian, the two markers of indefiniteness may occur simultaneously with an indefinite noun , with yek preceding the noun and i following it .

At this juncture, we may return to the position of r@ (i.e. direct object marker) and mention three subsidiary points about it :

(a) r@ does not always have to be confined to definite nouns . Indefinite nouns, followed by the indefinite marker i , sometimes take r@ if they are direct objects . This practice , infrequent as it may be , occurs normally and , therefore, I cannot denounce it as ungrammatical . Some examples would be:

	(book-a)		(bought-I)	(and)	(to)	(Hasan)	(gave-I)
14:	ket@bi	r@	xaridam	va	be	hasan	d@dam

= I bought a book and gave it to Hasan .

	(houses)		(saw-I)	(but)	(none)	
15:	x@neh@?i	r@	didam	vali	hickod@m	r@

(not-liked-I)
napasandidam = I saw a few houses but I liked none.

	(Hasan)	(house-a)		(to)	(I)	(showed)
16:	hasan	x@ne?i	r@	be	man	ne&@n-d@d =

Hasan showed a house to me .

Considering this , the position of r@ and the question of its occurrence or absence may be briefly expressed in this way :

A direct object :
- when definite must take r@ .
- when generic must not take r@ .
- when indefinite may take r@ (usually does not) .

A noun which is not a direct object must not take r@ . This brief explanation will be formulated in table No. 3 , p.269.

(b) We have just mentioned that a noun which is not a direct object must not take r@ . In recent decades , a practice contrary to this rule has frequently been observed in writings and speech which are not regarded eloquent or even grammatically correct . In my judgment, the discrepancy is not a challenge to the rule . It simply arises from a lack of ability to distinguish a direct object and from wrongly feeling (or thinking) that a noun is a direct object when it is not. Consider the following examples :

	(boy)		(that)	(had seen_you)	(came)	
17:	pesari	(r@)	ke	dide-budi	@mad	=

The boy whom you had seen came .

	(tree)		(that)	(planted-I)	(green-became)	
18:	deraxti	(r@)	ke	k@&tam	sabz- &od	=

The tree that I planted came into leaf .

In 17 , pesar = " boy" , although it is the direct object of the verb dide-budi = "you had seen" in the subordinate clause ke dide-budi = "whom you had seen" , is in fact the subject in the main sentence and in relation to the main verb (i.e. @mad = "came"). The feeling of its being a direct object is , therefore, a false one and a noun in such a position would not normally take r@ . The same explanation applies to 18 where deraxt = "tree" is the subject in the main sentence and of the main verb sabz-&odan = "to leaf" although it is the direct object in the subordinate clause ke k@&tam = "that I planted" .

I must emphasise that although I have declined to label the practice as deviant , I do not deem it right to make room for it in the rules or to amend the rules (and also the T rule for the direct object marker , p. 34) accordingly . This is because according to my observations , most people regard the practice as a wrong one . Sentences such as 17 and 18 are regarded as correct by everybody if they lack r@ . But they are regarded as wrong by most native speakers of Persian if they include r@ . Of course , in the distant future , the situatuon may change and necessitate new rules . But at the present time, the rules already given seem to be strong enough .

(c) Pronouns , forming a sub-division of noun-phrases , are affected by r@ in the same way that

noun-phrases are. Here, we must note that all pronouns take r@ when they are direct objects. The grammatical justification for this is that all pronouns are, by nature, always definite because they refer to noun-phrases already mentioned or already in mind. This is so for some pronominal determiners as well. Consider the following examples:

(I) (not-know-he)
19: man r@ (i) nemi&en@sad = He does not know me.

(none) (not-liked-I)
20: hickod@m r@ napasandidam = I liked none.

(some) (have seen-I)
21: ba?zi r@ dideam = I have seen some.

(all) (will-they-kill)
22: hame r@ x@hand-ko&t = They will kill all.

(this) (take)
23: in r@ bard@r = Take this.

(these) (not-eat)
24: inh@ r@ naxor = Do not eat these.

But there are some pronominal determiners which are not definite by nature and, therefore, they do not take r@. Consider the following examples:

(what)(know-I)
25: ce mid@nam = What do I know?

(nothing)(not-said-he)
26: hic nagoft = He said nothing.

(i) mar@ is simply the contracted from of man r@ .

(what) (bought-you)
27: ce xaridi = What did you buy?

(nothing)(not-bought-he)
28: hic naxarid = He bought nothing.

(none) (not-bought-he)
29: hicyek r@ naxarid = He bought none.

In 28, hic is indefinite and so it does not take r@ after it, whereas in 29 the compound pronominal determiner hicyek is definite and so r@ occurs after it.

c: Generic

A noun in the generic sense refers to an object as a commodity not as a countable separate object - in other words, as a representative of type. Thus, in 30, the noun ket@b = "book" refers to "book" as a commodity and it might denote one book or several books:

(Ali)(book) (bought)
30: ali ket@b xarid = Ali bought {a book / books}

When a noun is the direct object of a sentence, the direct object marker (i.e. r@) is not used if the noun is in its generic sense. Thus, in 31, p@rce = "cloth" is used in its generic sense and in 32, in which the same word is followed by r@,

it is definite:

(Parvin)(cloth) (bought)
31: parvin p@rce xarid = Parvin bought cloth.

(Parvin) (cloth) (bought)
32: parvin p@rce r@ xarid = Parvin bought the cloth.

Generally speaking, when a noun is not a direct object, there is no formal definite criterion for distinguishing generic and definite senses in all sentences. For instance, the word zan = "woman" is in its generic sense in 33 and it cannot be interpreted as a definite noun, whereas it is definite in 34:

(woman)(should)(brave) (be)
33: zan b@yad delir b@&ad = A woman must be brave.

(woman)(from) (bazaar) (came)
34: zan az b@z@r @mad = The woman came from the bazaar.

In the above examples, the situation in which the word zan = "woman" occurs, determines its definiteness or genericness. But we want to say that this situation to which we refer is not the context of situation as it is known in linguistics. It is the grammatical status of the sentence which determines the definiteness or genericness of the noun. The

following examples show that sometimes it is the tense of the verb which determines whether the noun is definite or generic. Consider the examples:

(film)(good) (is)
35: film xub ast = {A film is good. / Films are good.

(film) (good) (was)
36: film xub bud = The film was good.

In 35, in which the verb is in the present tense, the word film is interpreted as a generic noun whereas in 36, in which the verb is in its past tense, the same word is interpreted as definite. These examples show that, all things being equal, the tense of the verb shows the definiteness or genericness of the noun.

Notice that 35 and 36 are equational sentences, and what we have said above does not apply to the other kinds of sentences. Here are some examples:

(girl) (from)(school) (came)
37: doxtar az madrese @mad = The girl came from the school.

(girl) (from) (school) (comes)
38: doxtar az madrese mi?@yad = The girl comes from the school.

In both 37 and 38, the word doxtar = "girl" is definite. Our previous examples i.e. 33 and 34 (p.263) show that the verb determines the definiteness

or genericness of the noun. In 33 b@&ad is subjunctive and in 34 @mad is indicative. Therefore, we can conclude that sometimes it is the mood and sometimes it is the tense of the verb which determines whether the noun is definite or generic.

There are very rare cases when the noun is plural and generic. In these cases the plural marker does not indicate only the plurality of the noun; it also indicates abundance. In 39 the noun ket@b = "book" is generic and the plural marker h@ indicates the great number of books.

	(he)	(books)	(wrote-he)	
39:	u	ket@bh@	neve&t	= He wrote many books.

As an epilogue to this chapter, I must lament the fact that the question of definiteness, indefiniteness and genericness has never been deeply dealt with in Persian grammars and has not been properly understood.

First, few grammarians have detected the generic sense in Persian. Dr. Mohammad Moin of Tehran University, Professor A.K.S. Lambton of London University and Mr. L.P. Elwell-Sutton of Edinburgh University are the notable exceptions. Secondly, another important fact has been largely ignored and not properly dealt with: that r@ is not merely a direct

object marker but that it moreover differentiates generic nouns, on the one hand, from definite and indefinite ones on the other. Surprisingly, some attention has been paid to this fact by some non-Persian writers of Persian grammars (notably Lambton and Sutton [i]). But the fact has been overlooked even by the most prominent Persian writers of Persian grammars (for instance, by Dr. M. Moin, Dr. P.N. Khanlari, Abdul-Azim Qarib and Abdur-Rahim Homayun-Farrokh).

The third important point which has not been given due attention is the existence of i (the marker of the relative clause) and its distinctness from the indefinite i. Again, Lambton and Sutton have understood and illustrated the relative clause marker i. But in the wide range of Persian Grammars, there is an abundance of misunderstanding in this respect. The point has best been dealt with, among Persian grammarians, by Dr. Mohammad Moin (Professor of Persian Literature at the University of Tehran) in his detailed work Noun, Singular and Plural, Definite and Indefinite .[ii] But unfortunately, he has led

---

(i) See Persian Grammar by A.K.S. Lambton and Elementary Persian Grammar by L.P. Elwell Sutton, both published by Cambridge University Press.

(ii) The book was published by Tehran University Press in 1958. It has not been translated into English and the extract to appear soon is not an exact quotation but my translation from the Persian original. For the exact Persian name of this book, see the bibliography at the end of this thesis.

himself astray. On page 236 he writes:

"The i in question is not a sign of definiteness because it does not make the following [sic] noun definite. It only relieves the noun from indefiniteness and total unclarity. For instance, when we say (book) (that)(yesterday)(bought-I) ket@bi ke diruz xaridam (useful) (not-was) mofid nabud = "The book which I bought yesterday was not useful", here we have not mentioned the name of the book and it is not clear what book is meant. But it is not absolutely indefinite either, because a particular book was bought by me yesterday. For this reason, it would not be right to call this i an indefinite i either. It is better for us to call this i the sign for special (or allocating) indefiniteness. After this i, there always follows a sentence beginning with ke, and this following sentence is like an adjective for the noun to which i is attached."

Dr. Moin has here circumnavigated a simple issue and, in the unnecessary process, has led himself into a major error and a minor one. The major error is that in his example he fails to see the very clear and unquestionable definiteness of the word ket@b = "book" and puts forward the strange argument that since the book's name has not been mentioned,

it is not definite. The minor error is that he says that after such an i there always appears a sentence beginning with ke. In this way, he fails to grasp the point that it is the presence of the restrictive relative clause (i) beginning with ke that necessitates such an i and not the other way round.

Nevertheless, I must emphasise that even this much attention is commendable since, as I mentioned before, other Persian grammarians have almost totally failed to differentiate the restrictive relative clause i from the indefinite i.

The formal criteria which determine the three senses of the noun are formulated in the following table:

(i) The question of restrictive and non-restrictive relative clauses has never been discussed in Persian grammars.

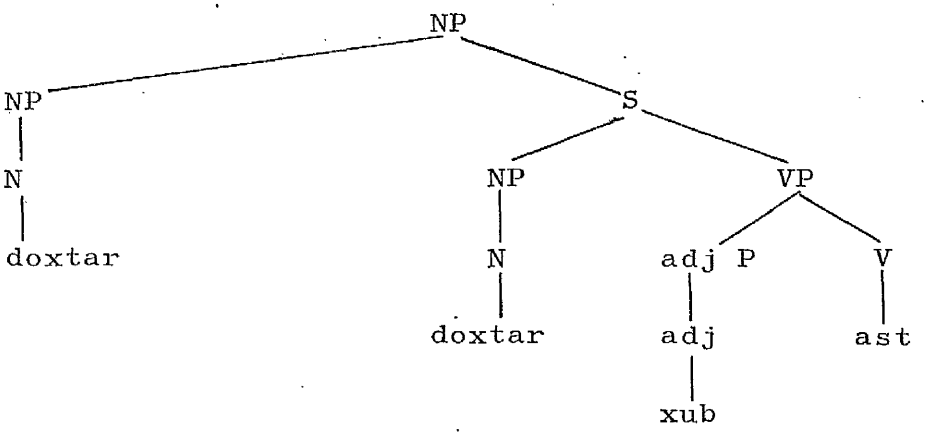
	Subject		Object	
	Definite Marker	Case Marker	Definite Marker	Case Marker
Definite	ø	ø	ø	+ r@
Indefinite	{+i / yek+ (i)} ø/preceded by a cardinal number	ø	+ i ø/preceded by a cardinal number	± r@ -r@/preceded by a cardinal number
Generic	ø	ø	ø	- r@

Table Three

Composition of NP in Surface Structure

A noun-phrase in surface structure may consist of a noun plus an adjective like doxtare xub="good girl" (girl)(good) which is derived from the phrase doxtari ke xub ast= (girl) (that)(good)(is) "the girl who is good" and the phrase marker associated with its deep structure would be:

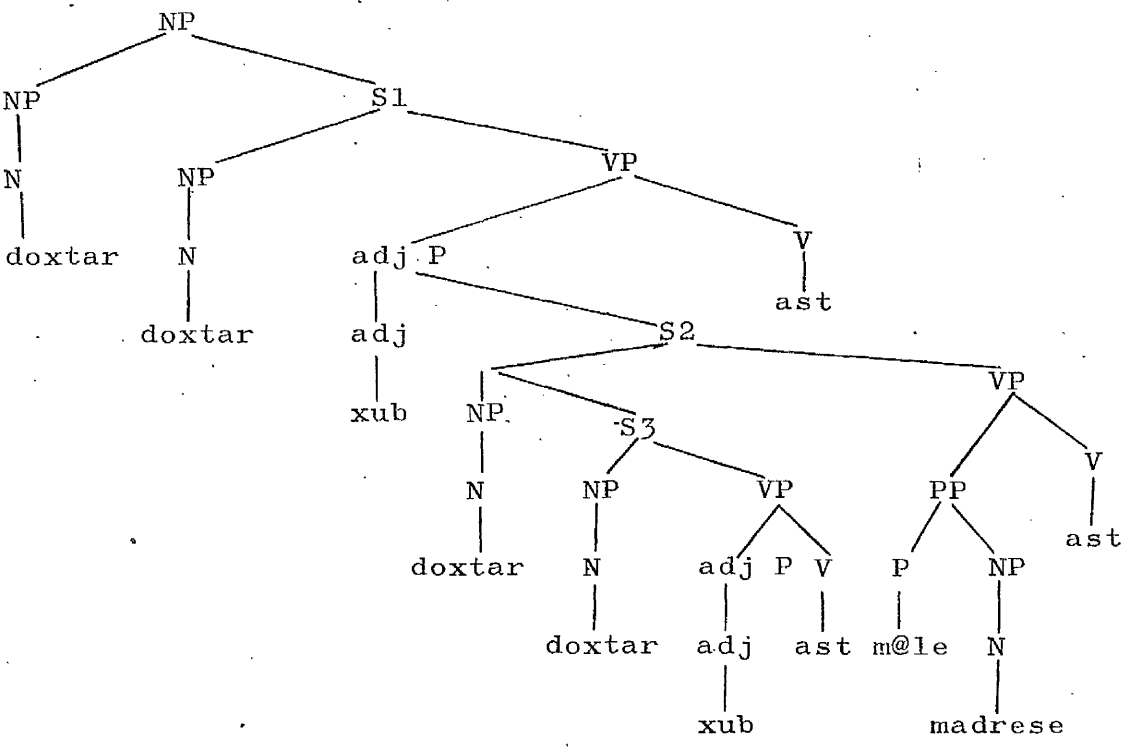
(i) I have used yek+ rather than +yek in order to show that yek would precede a noun-phrase and not follow it.



P.M.1.

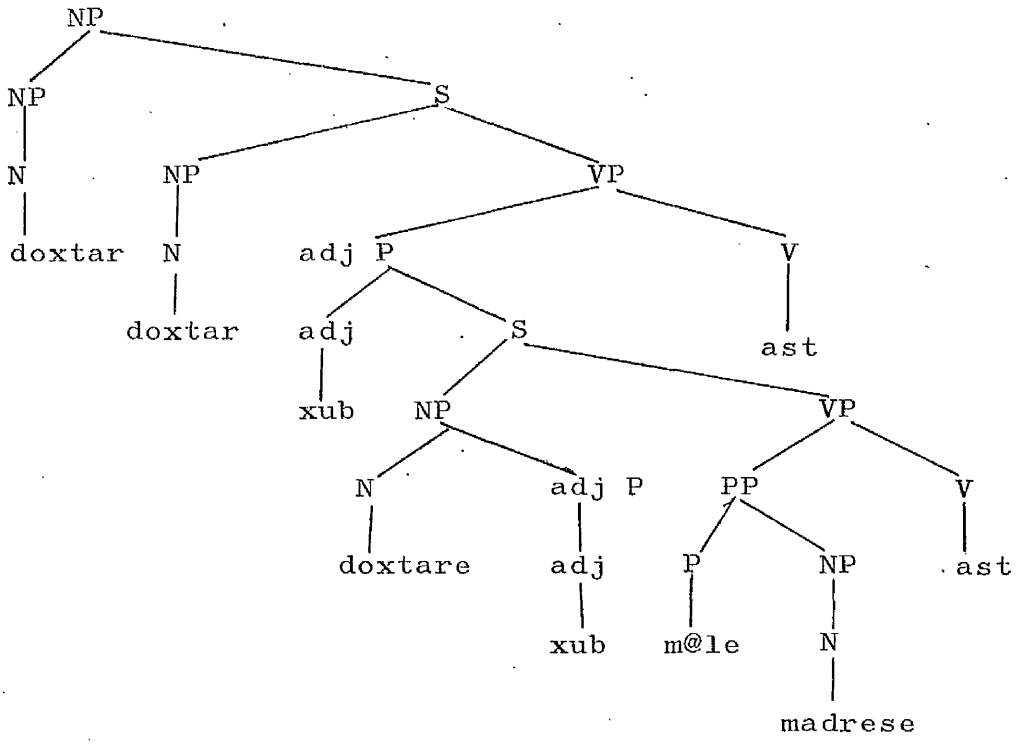
As we have illustrated before (p .62), we have to apply T relative claus formation(p.66) ,T pronominalization, and T noun_phrase formation No. 1 in order to generate the surface structure.

An NP may consist of N + adj + N like (girl) doxtare (good) xube (school) madrese = "the good girl of the school" which has a complicated deep structure. The transformational rules involved in its generation are among those we have mentioned before (i.e. T relative clause formation(p.66) ,T pronominalization and T noun_phrase formation No. 1),Here is the phrase marker associated with its deep structure:



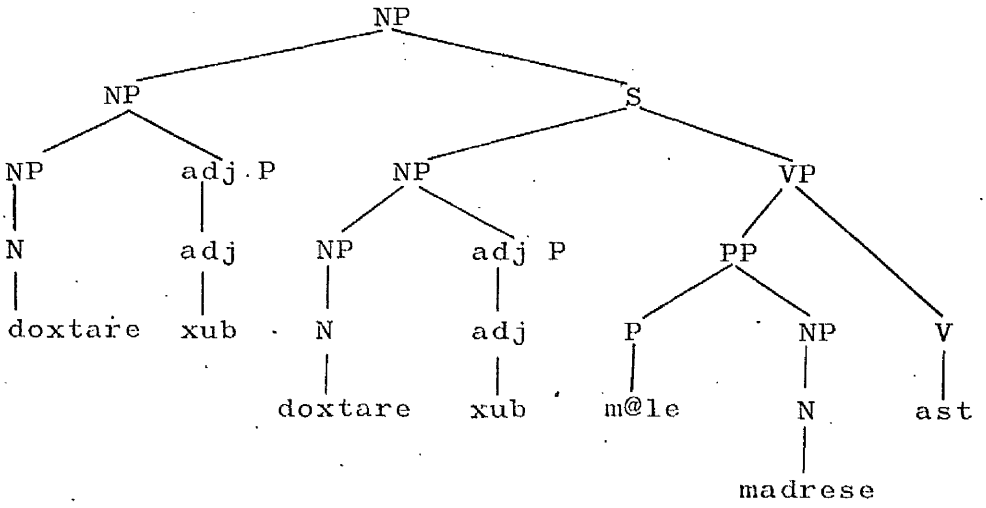
P.M.2.

After applying T relative clause formation (p.66) and T pronominalization to the string (girl) (girl) doxtar - doxtar- (good) (is) xub - ast dominated by S2, the resulting string would be (girl) (that) (good) (is) doxtari ke xub ast. And then T noun-phrase formation No. 1 converts this new string to doxtare xub and the tree diagram would have the shape:



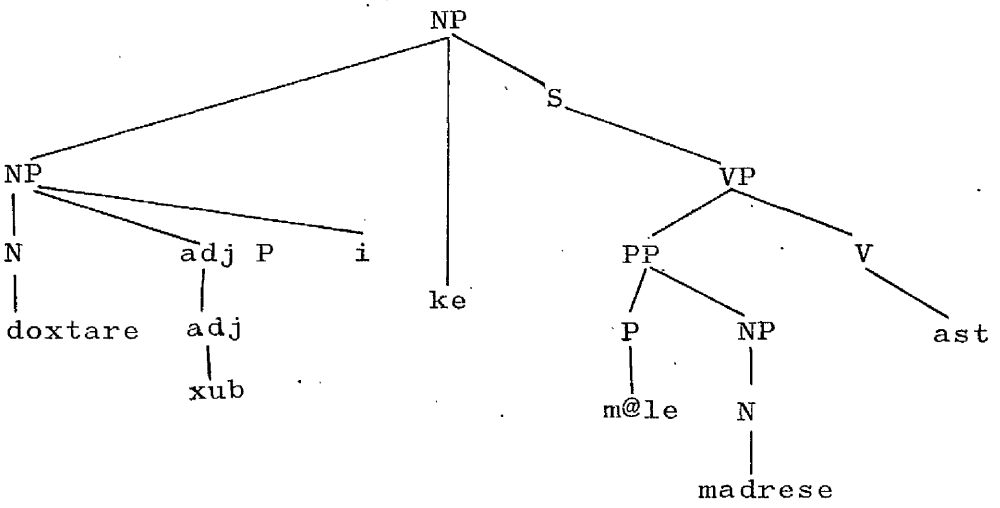
P.M.3.

Now we apply the same rules (i.e. T relative clause formation (p.66), T pronominalization, and T noun-phrase formation No. 1) to the string (girl) (girl) doxtar - doxtar - (good)(is) xub - ast dominated by NP. Again, we derive from it the noun-phrase doxtare xub . The shape of the tree diagram after applying these rules would be:



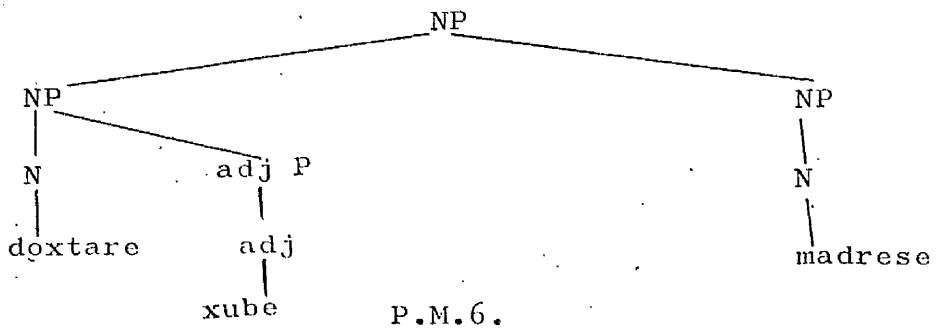
P.M.4.

The same rules are to be applied for the third time; this time to the string (girl) (good)(girl)(good) doxtare-xub-doxtare-xub (belong to) (school) (is) m@le - madrese - ast. T relative clause formation (p.66) introduces the element i after the first (girl) (good) doxtare - xub and also introduces ke to the string. T pronominalization would omit the second identical NP. P.M.5 shows the tree diagram associated with the resulting string.



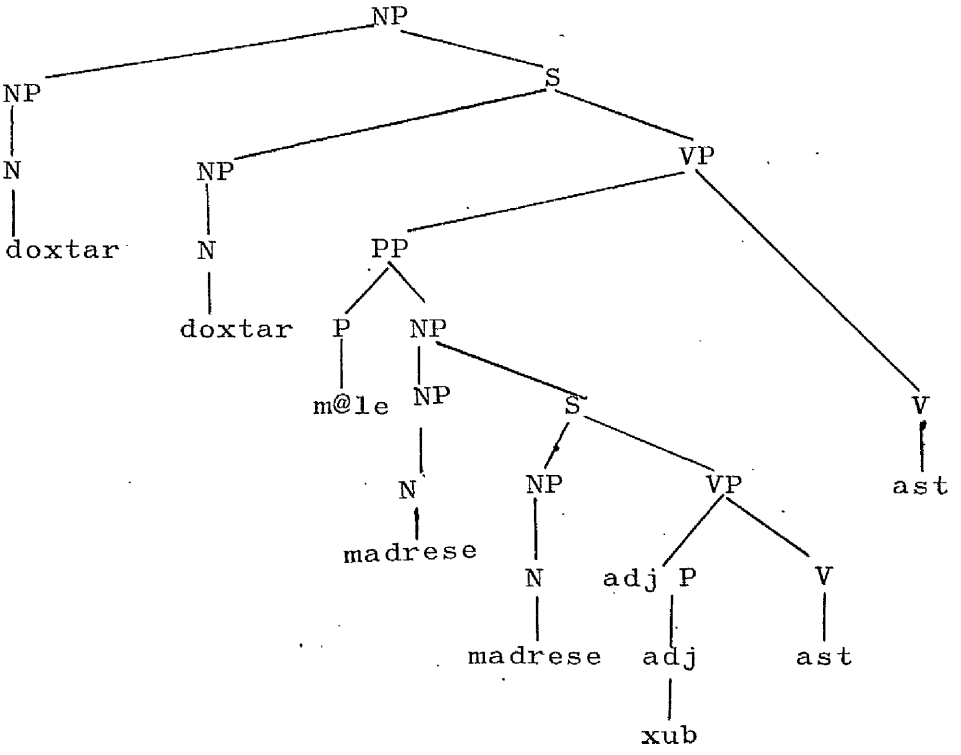
P.M.5.

T noun-phrase formation No. 1 would omit ast, ke, m@le and i from the string above and add e at the end of xub and we derive the string (girl)(good) doxtare xube (school) madrese .



P.M.6.

An NP may consist of N + N + adj like $\frac{\text{(girl)}}{\text{doxtare}}$ $\frac{\text{(school) (good)}}{\text{madreseye xub}}$ ="the girl from the good school". The phrase marker associated with its deep structure would be:



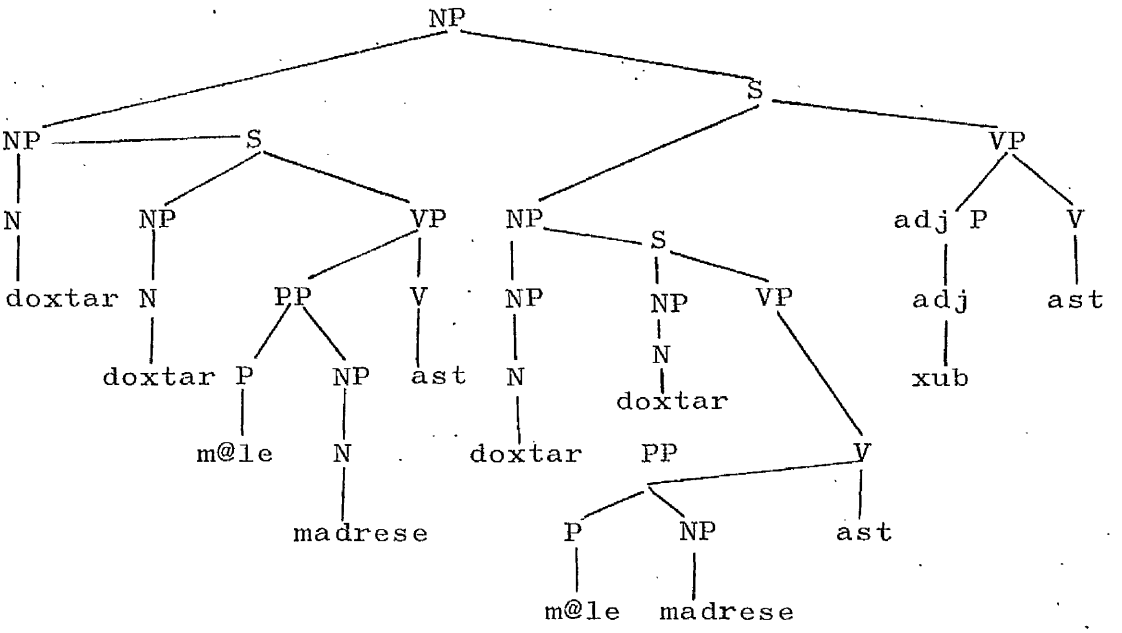
P.M.7.

Again, the transformational rules which are involved here would be: T relative clause formation(p.66) T pronominalization and T noun-phrase formation No. 1 to convert the string madrese – madrese-xub-ast to $\frac{\text{(school) (good)}}{\text{madreseye xub}}$. And again, we have to apply the above three rules to convert the string $\frac{\text{(girl)}}{\text{doxtar}}$ $\frac{\text{(girl) (belong to) (school) (good)}}{\text{doxtar – m@le – madreseye – xub}}$ to $\frac{\text{(girl)}}{\text{doxtare}}$ $\frac{\text{(school)(good)}}{\text{madreseye xub}}$. We do not show every step of this process here because we have shown it in different cases before. The point which we have to discuss here is the difference between 40 and 41:

(girl) (school) (good)
40: doxtare madreseye xub = the girl from the good school.

(girl) (school) (good)
41: doxtare madreseye xub = the good schoolgirl .

Although 40 and 41 are the same in writing, they are not the same either in their deep structures or by way of stress. In 40 (girl) (school) doxtare madrese has two stresses ; one carried by the last syllable of doxtar (i.e. tar) and the other one carried by the last syllable of madrese (i.e. se). But 41 should be read with a single stress on the last syllable of madrese. In this way, we treat doxtare madrese as one unit, and then we add the adjective xub to it. Quite often, we even omit the ez@fe from the end of doxtar = "girl" and say (girl)(school) doxtar madreseye (good) xub = "the good schoolgirl" to show that the two nouns form a unit. This fact is shown in the deep structure of 41 which differs from that of 40. The deep structure of 41 is shown by P.M.8. The deep structure of 40 has been shown by P.M.7, page 274.



P.M.8.

Here is the surface structure derived from P.M.8 on which the stress rule is assumed to have operated

(girl) (school) (good)
42: doxtare madreseye xub = the good schoolgirl .

And here is the surface structure derived from P.M.7 on which the stress rule is assumed to have operated:

(girl) (school) (good)
43: doxtare madreseye xub = the girl from the good school.

Another crucial point is that, as we have shown (p.86),we cannot always have N + N + adj construction. So 44 is deviant.

(Ferdousi) (poet) (great)
44:* ferdousiye &@?ere bozorg

but we can have it in the form of 45:

(Ferdousi) (poet) (great)
45: ferdousi, &@?ere bozorg = Ferdousi, the great poet.

Phrases like 45, as we have illustrated before (p. 87), have two compound sentences in their deep structures (i.e. ferdousi &@?er ast = "Ferdousi is the poet" and ferdousi bozorg ast = "Ferdousi is great"). And we have to apply T sentence insertion and T relative clause formation (non-restrictive) to it to have the phrase (Ferdousi)(that)(poet)(great) ferdousi ke &@?ere bozorg (is) ast = "Ferdousi who is the great poet", and then we have to apply T apposition (P.92) to obtain the above surface structure (i.e. 45).

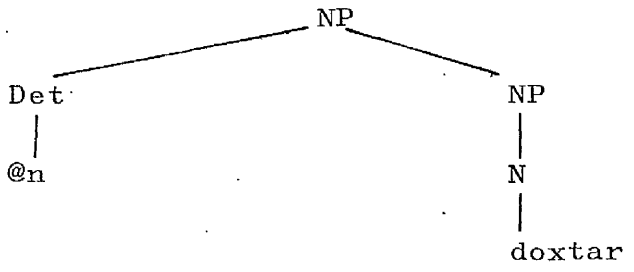
The question arises: Why can we have such phrases as 40 and 41, but not phrases like 44 although all three of them have the same string (i.e. N + N + adj)? The reason is a semantic one. In 44 &@?er = "poet" refers to the same person as ferdousi = "Ferdousi" and, so, it can be substituted for ferdousi if the conversation is continued. For instance, we can have:

(Ferdousi)(poet) (great) (is) (and) (those)(that)
46: ferdousi &@?ere bozorgi ast va @nh@ ke
(this)(poet)(great) (had seen) (to)(he)
in &@?ere bozorg r@ dide-budand be u
(as) (one) (human) (great) (respect -
be?onv@ne yek ens@ne bozorg ehter@m-
placed.-they)
migoz@&tand = Ferdousi is a great poet and

those who had seen this great poet respected him as a great human being.

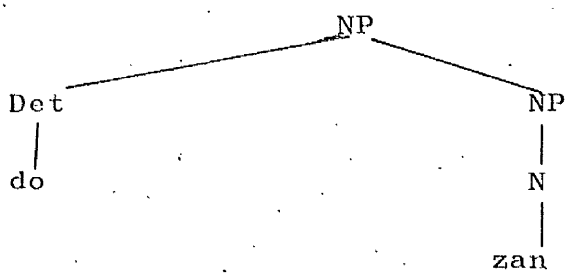
As we can see, in 46 the phrase (poet)(great) &@?ere bozorg = "great poet" is repeated in the sentence after va = "and" and refers to the same person. In 40 and 41 we cannot do so. In other words, madrese = "school" does not refer to the same thing as doxtar = "girl" and doxtar cannot be substituted by it in the course of speech.

An NP may consist of a determiner and a noun; like (that)(girl) @n doxtar = "that girl". Its deep structure would be simply:



P.M.9.

Here is another example with a noun following a cardinal number which is included among determiners:
(two)(woman)
do zan = "two women"

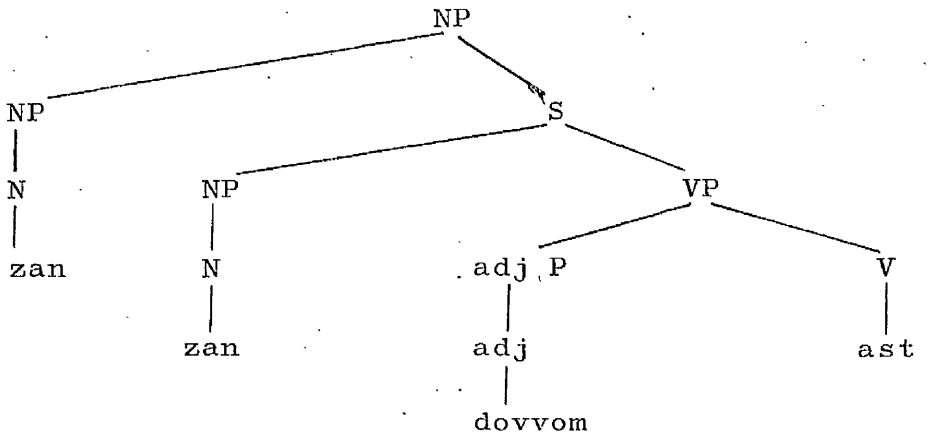


P.M.10.

The surface structure of noun-phrases consisting of a noun plus an ordinal number shows that we should consider ordinal numbers as adjectives. Consider the following examples:

		(woman)	(second)	
47:	(a)	zane	dovvom	= second woman.
		(woman)	(good)	
	(b)	zane	xub	= good woman.
		(second)	(woman)	
48:	(a)	dovvom	zan	= second woman
		(good)	(woman)	
	(b)	xub	zan	= good woman.

As the examples 47 and 48 show, the ordinal number dovvom = "second" behaves exactly like the adjective xub. In 47(a), where it is preceded by a noun, there is an ez@fe marker between them, and this is just how adjectives behave. And in 48(a), where it is followed by a noun, there is no ez@fe marker between them, and again this is just how adjectives behave. We illustrate this by 47(b) and 48(b). Here is the deep structure of the phrase zane dovvom = "second woman" :



P.M.11.

An NP may consist of N + va + N; like 49 :

(girl)(and)(boy)(came)
49 : doxtar va pesar @madand = The girl and the boy came.

49 could be interpreted in two ways, either:

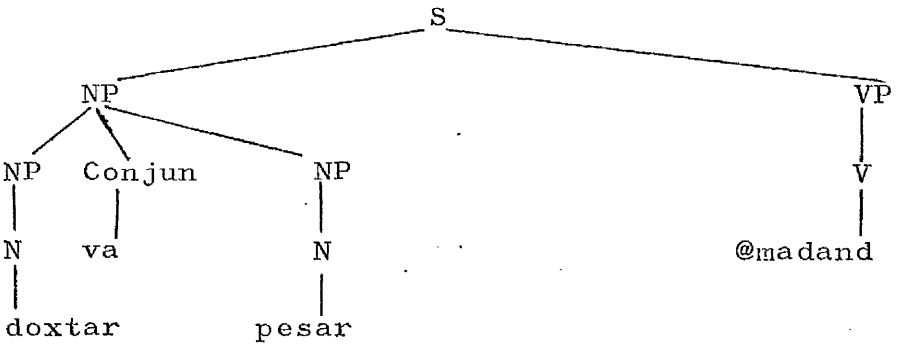
(girl) (and) (boy) (together)(came)
50: doxtar va pesar b@ham @madand =
The girl and the boy came together.

or:

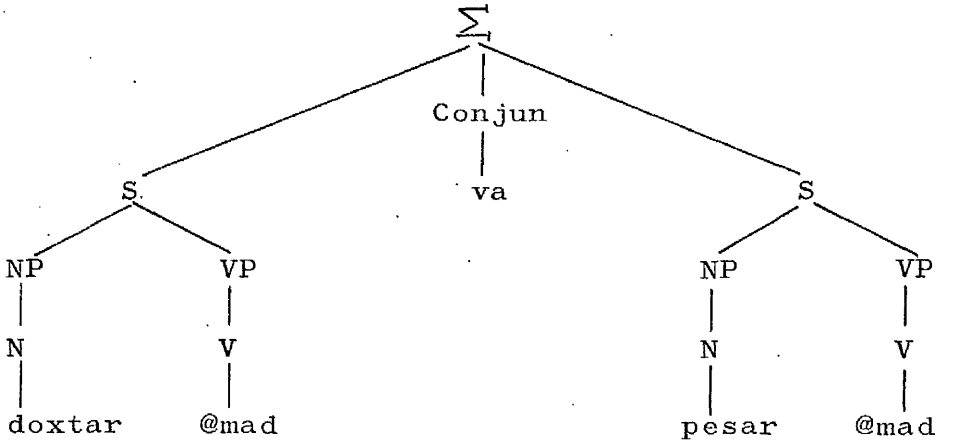
(girl) (came) (and) (boy) (came)
51 : doxtar @mad va pesar @mad = The girl came and the boy came (separately).

50 shows that the action has taken place jointly and 51 shows that the action has taken place separately. Accordingly, 49 is ambiguous. P.M.12 and P.M.13 show the two deep structures underlying it. P.M.12 is associated with its

interpretation as shown in 50, and P.M.13 is associated with its interpretation as shown by 51:



P.M.12.



P.M.13.

For generating the surface structure of 49 from P.M.12, the only T rule which we have to apply is T concord; but for generating 49 from P.M.13, there are more T rules to be applied. First, we have to apply T NP joining:

T NP joining:

SD = X - NP - VP - Conjun - NP - VP

1 - 2 - 3 - 4 - 5 - 6

$\Longrightarrow$ option

SC = 1 - 2 - 4 - 5 - 3 - Ø

Condition: (a) 3 = 6

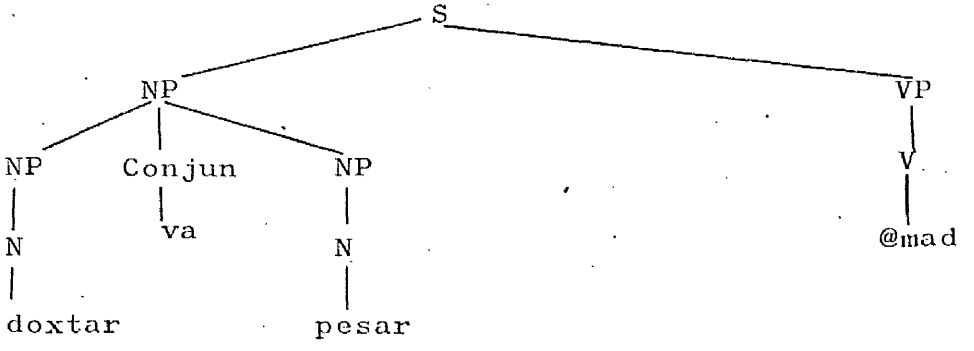
(b) 4<va or y@

The rule shows that if we have two sentences joined to each other by va="and" or differentiated from each other by y@ = "or" and if their VP's dominate the same elements, we can join the two NP's and omit the second VP. Condition (b) shows that the grammar can generate such sentences as 52:

(girl) (or) (boy)(misled-become)

52: doxtar y@ pesar gomr@h-mi&avad = The boy or the girl will be led astray ;

in contexts like agar m@dar va pedar n@d@n b@&and doxtar y@ pesar gomr@h-mi&avad = "If the mother and the father are ignorant, the daughter or the son will be led astray". Anyway , after applying T NP joining, the tree diagram 13 would have the shape :



Here, we are to introduce another T rule to cope with the concord between verb and two nouns which are joined together by va:

T concord with joint nouns:

SD = X - N - Conjun - N - VP - AUX - Y

1 - 2 - 3 - 4 - 5 - 6 - 7

$\Longrightarrow$ oblig.

SC = 1 - 2 - 3 - 4 - 5 - 6 - 7

[+plural]

Condition: 3 < va

This rule shows that when two nouns are joined together with a conjunction, the auxiliary should have the feature [+ plural] with it.

In equational sentences, when NP consists of N + adj and the noun is indefinite, the indefinite marker i may occur at the end of the noun, or at the end of the adjective. Thus we can have:

(Ali)(boy) (good-a)(is)

53: ali pesare xubi ast = Ali is a good boy.

(Ali)(boy-a)(good)(is)

54: ali pesari xub ast

As the example 54 shows, the ez@fe marker e is omitted when we add an indefinite marker to the end of the noun. The point is that the indefinite marker usually occurs at the end of the adjective,

especially in the case of adjectives which overlap with adverbs, like xub = {"good" / "well"} and c@bok = {"quick" / "quickly"}. The reason is that if we were to add the indefinite marker to the end of the noun, the sentence would be ambiguous for the reader. Consider the following example:

55: (student) {(quick) / (quickly)} (came)
&@gerdi c@bok @mad

55 can mean either "A quick pupil came" or "A pupil came quickly". Thus the sentence may be derived from either of two different deep structures. We should mention that 55 need not be ambiguous when it is uttered because there is a pause between &@gerdi="a student" and c@bok = {"quick" / "quickly"} when c@bok is used as an adverb. And as we give priority to the spoken form of language and consider the written form a secondary manifestation of it, and a tool for showing the spoken form, we do not wish to consider 55 as being really ambiguous. Ambiguity arises when we want to read 55(i). Here are the phrase markers associated with the two deep structures of 55:

(i) Notice that we do not yet have any restrictive punctuation rule for writing Persian to enable us to show the pause between &@gerd and c@bok.